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# THE ELEMENTARY SCHOOL TEACHER AND COURSE OF STUDY

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## SYLLABUS FOR DISCUSSION IN FACULTY CONFERENCE.

FRANCIS W. PARKER.

As A faculty we hold, in theory at least, the following doctrines:

1. That skill and power in the modes of attention — observation, hearing language, and reading — may be acquired by the study of the central subjects, *i. e.*, those subjects that come into the category of man and nature.

2. That mathematics, which pervades all subjects and is essential to the teaching of all subjects, may be taught, especially arithmetic and geometry, by the right use of measuring and form in all school work.

3. That technical skill may be acquired in each and all the modes of expression — gesture, voice, speech, music, making, modeling, painting, drawing, writing — by using each and every mode of expression as a means of helping others.

These propositions we have heard and read many times, but we are still very far from realizing them in actual work. If they are true, then the whole time of the pupil may be devoted to the central subjects, *i. e.*, the subjects for mental nourishment; and the modes of attention, the teaching of mathematics, and the use of all the modes of expression will steadily enhance the growth of thought-power. In other words, reading, mathematics, and all the modes of expression are absolute necessities in the growth of thought, and it would take, under this hypothesis, no time to teach them. It is well for us to ponder upon the

tremendous economy of effort and time this would mean to our pupils.

The questions below are respectfully submitted to the faculty for its earnest thought and careful discussion:

1. Are the above propositions absolutely true? If they are not true, in what do they err?

2. If they are true, why do we not apply them strictly in all our work?

REASONS WHY THEY ARE NOT APPLIED.

1. One teacher, obedient to habit, is anxious to get over prescribed ground, to teach a subject within a set time, and does not, therefore, understand the correlations of the modes of attention, of the modes of expression, and of form and measuring.

One correction of this bad habit is the firm belief that economy in teaching means the development of strong, related images, or an apperceptive mass. The greatest economy is to have that mass self-efficient in the future mental growth of the individual. The teacher should, therefore, use all possible means to develop strong images, it being plain that failure to use any one of the means weakens the whole product.

2. Another teacher works principally for the memorizing of words, instead of for the growth of images, vainly imagining that a repetition of words induces knowledge or power. To think that children really know because they can repeat words and answer questions is perhaps the greatest delusion in education.

3. A third teacher, while holding the theory to be good and sound, does not use the proper means for the development of thought-power. Carelessly, or otherwise, he leaves out some of the strongest auxiliaries to the development of the mind.

As teachers, we have one fundamental thing to learn, and that is, *how to teach*, and how to use at the right time each and all the means for the nourishment of the pupil's mind.

There is no mental growth without interest, interest being the estimation of the worth of mental action measured with the ideal to be realized. Let us, then, take the auxiliaries to thought-power and consider them briefly one by one.

I. THE MODES OF ATTENTION.

Attention is study. The fundamental thing in attention is imaging. The teacher should know when the child is studying, by constantly reading the record of the child's growth.

*Observation.*— Observation is that mode of attention which lies at the basis of mental power. There is no technique in observation; the child's mind is in contact with the objects to be observed. The great question is whether the pupil observes the object properly. There must be, therefore, constant tests to ascertain whether or not the child really observes.

*Hearing language.*—Hearing language is a mode of attention acquired very early by the child, and it should be enhanced in school by persistent practice. The power of the child to understand oral words is often very much overestimated. Children should be trained to understand each other and the teacher. The repetition of a statement implies, generally, inattention on the part of the pupil.

*Reading.*—Reading is imaging. Study of text is attention. We all know how much time it has taken, and takes now, to teach a child to read. Failure in teaching to read comes fundamentally from lack of interest on the part of the child, lack of necessity for his reading, and the utter absence of purpose in reading. Thus sometimes years are futilely spent in attempts at training the child to think by means of the printed word. Every teacher should be a thoroughly capable teacher of reading. Only those books and subjects should be selected for reading that enhance the image growth, or enhance the study of the central subject in hand. The pupil reads to help others to think. The teacher should ever bear in mind that the child observes, hears language, and reads with the apperceptive mass that he already has. He reads to bring images together into wholes, he reads to enhance his mental power; and the teacher should be ever on the alert to know when reading will help mind-growth. It is a plain and simple proposition that, if each teacher, through the eight grades, used reading for the enhancement of thought, the child would read well and use reading all the time as a means of mental growth.

## II. THE MODES OF EXPRESSION.

*Speech.*—Oral language is the mode of expression most commonly used, and may serve continually as a means of developing thought and motive. Speech should spring from original thought, should be one outcome of the study of the central subjects. A desire to help others impels speech; strong or growing images demand oral expression. The teacher is there to see that the enunciation is pure, and the pronunciation and the grammar correct. Criticism should not impede utterance, but should guide it, in order to avoid a repetition of mistakes. Growing thought should have clear, distinct manifestation.

Oral reading: Reading is imaging; oral reading is the expression of thought: one is attention, the other expression. Although closely related in function, they differ in action. Observation is imaging; painting is the expression of images. As well might painting be called observation as oral reading, reading. Oral reading is speech differing from ordinary speech in

the use of oral words presented by the printed ones. Its moral function, like that of other modes of expression, is to help others; its mental function is to enhance thought-power. Reading (attention) should be expressed by speech (original language), by drawing, painting, and modeling. When a pupil has read a selection, he may express his new thoughts in his own words, he may answer questions that show the acquired thought; but he should read orally only when the images gained are clear and growing, or when he has gained a definite thought to express. Unclear thought expressed by oral reading gives rise to stammering or monotonous drawl. To develop vivid and strong images, there should be continual exercises in dramatic reading, the selections to be made in correlation with the subjects in hand.

*Writing.*— Next in importance to speech as a mode of expression is penmanship. In order to be educative, penmanship must be easy, ease being indicated by smooth lines; rapid, to be the spontaneous expression of thought; and, lastly, legible. Easy, smooth writing is always capable of improvement; rigid writing soon reaches its limit. Writing should be used constantly as a mode of thought-expression. Blackboard and crayon, paper, *good ink* and *good pens*, should always be at hand for ready use.

Spelling: Constant writing and the correct making of words should always go together. A word misspelled is likely to haunt the pen of the writer. The key to spelling is much writing, writing that expresses thought. *Never allow a pupil to use an incorrect form of speech.* "Learn to do by doing" is the everlasting rule.

Grammar: Grammatical writing, like correct speech and spelling, becomes habitual through constant use. It includes punctuation, capitalization, and paragraphing, as well as grammar — in short, all the forms of speech. Whenever a direction, rule, or definition will aid in fixing correct forms in the mind, it should be taught. Thus grammar may be the warp and woof of language teaching.

*Arts and crafts.*— The question of questions that should ever be in the teacher's mind is, What mode of expression will enhance the growing thought of the pupil? Making, modeling, painting, and drawing are modes of expression that demand clear images, demand the holding of images until they are expressed. The employment of these modes reveals the strength or the weakness of images, or their lack.

Through expression in all its modes the teacher is able to determine and criticise the thought of his pupil. When the teachers of eight or nine successive grades sedulously follow the suggestions here given, the efficiency of the pupils in the technique of the modes of attention, of the modes of expression, and in the knowledge of mathematics will exceed any school work ever yet done.

## PROPOSITIONS FOR THE PROFESSIONAL TRAINING CLASS.

(TO BE VERIFIED OR DISPROVED.)

I. My highest duty as a student, the duty which includes all other school duties, is to be of the greatest possible assistance to the whole school and to each and every member thereof.

II. The school should be an ideal community, in which there is hard, earnest work, vigorous health, play, and the best social life. The supreme function of social life is the *integration* of society.

III. *How to help in recitation.*— I am in the recitation to help the whole class, and every member of it, to the best possible educative activity of body, mind, and soul.

(1) I must strive to understand everything presented by any member of the class, including, of course, the teacher. (2) I must study the needs of all my classmates. (3) I must assist everyone with my own thought, adapting the thought to individual needs. (4) I must use my knowledge and skill to the best advantage of the whole class. (5) My personal ignorance, and failure to understand a subject, is oftentimes of more real help than my knowledge, if I lay bare that ignorance by frank expression. (6) I must overcome hesitation, reticence, self-consciousness, by a constant exercise of my will, thus training the will to obey the demands of duty. (7) By striving to help others in the class I am putting my knowledge to the best possible use — indeed, to its only use. (8) I discover what knowledge is most needed. This directs my preparation for class work; the desire to help is the strongest incentive to careful study. I may therefore concentrate all my efforts upon the needs of the class.

IV. The motive of helping others comprehends, in the most efficient way, all other educative activities.

(1) Attention, or study, is always at its height when I strive to help others. (2) I am closely studying the minds of others when I am trying to know what they think and how they think. (3) I am using all the knowledge I can bring to bear upon the subject discussed (concentration). (4) I am finding out my own weakness and lack of knowledge and power. (5) I am learning what to study and how to study. (6) If I cannot express myself by speech or writing, I feel the need of skill in other modes of expression.

V. *Example.*—The best thing for me to do is to make myself the most efficient example of a good student. My example, good or bad, has a tremendous influence upon my class or school.

(1) If I sit still and do not join heartily in the class work, I influence others to do the same. "A, B, and C do not take an active part; therefore I will not." (*a*) The effect of one coward is to make other cowards: courage begets courage. (*b*) If I put myself into my work with all my heart, others will do the same. If I am thoughtful, others will be thoughtful. If I frankly display my ignorance, it may become the habit of the whole class. (*c*) If I sympathize with the difficulties of others, my feelings will arouse the best in others.

VI. Common faults to be overcome.

(1) Self-consciousness is the greatest bar to progress. The one effective way of overcoming it is to overcome one's "small self" in the eagerness to help others. (2) Lack of genuineness — desire for recognition by "showing off," affectation — is a common fault which stands in the way of a sound, healthful, personal influence. This fault can be cast aside by forming and maintaining the habit of helpfulness. (3) Perfect honesty is cultivated by a perfect motive. (4) The use of the body as the instrument of the soul makes one desire to cultivate voice — language, gesture, and all that makes the body an effective instrument.

VII. The teacher and the student are one in motive. All may agree that the teacher should approve the statements given above, but many may doubt whether the student should have the same motive.

(1) The teacher should use all his powers to be of immediate and effective help to each and every member of the class. If he really helps the class, then the class help him more than he helps them. Why should not the student have precisely the same motive?

Education is not preparation for life; it is life.—*John Dewey.*

## SUGGESTIONS AND DIRECTIONS FOR THE STUDY OF PSYCHOLOGY.

### FIRST-YEAR CLASS.

The students are referred to the outlines upon psychology in Vol. I of the COURSE OF STUDY, and it is suggested that they begin with "Suggestions as to the Study of Psychology," No. 9, p. 779; No. 1, p. 28; No. 2, p. 123; No. 3, p. 191; No. 4, p. 271.

# APPLIED MATHEMATICS.

GEORGE W. MYERS.

## SYLLABUS FOR DISCUSSION IN FACULTY CONFERENCE.

### SCOPE OF MATHEMATICAL WORK IN THE SEVERAL GRADES OF THE SCHOOL OF EDUCATION.

THE teaching of number in the School of Education is based upon the following three principles:

I. The concept of number is best learned by generalizing from the concrete.

II. Number is an instrument through which the mind seeks to master the physical world.

III. The aim of teaching is not *instruction*, but *education*.

### FIRST GRADE.

The mental acts in measuring and numbering are so similar and so dependent upon each other as to make it quite impossible to pronounce upon the psychological precedence of either. Real measurement involves the idea of number, and rational numbering implies measurement. But since numbering is purely a mental act, while the mental acts in measurement have their physical counterparts, measurement is much more readily accessible to the child than is the mental act of numbering. It is, therefore, obvious that measurement furnishes the easiest avenue of approach to the abstract concept of number. Accordingly, in the first and second grades the number work begins by the measurement of such things as the pupil can handle, and such as need to be measured for *other than pure number purposes*.

As an abstract outcome of the number work of the first grade the children are expected to know—

(1) The whole numbers and their notation up to 12 or 15. (2) The meaning of +, read "and" at first, later "plus;" −, read at first "less" or "taken from," later "minus;" ×, read "times" or "multiplied by;" ÷, read at first "is how many times," later "divided by;" and =, read at first "are," later "equals." (3) All the fundamental addition facts, such as $2+3=5$, $4+5=9$, etc., using sums not exceeding 12 or 15. (4) All the correlative subtraction

facts, such as $5-2=3$, $5-3=2$, $9-4=5$, $9-5=4$; etc. (5) Halves, thirds, fourths, and fifths of numbers up to about 15, and how to write and read them. (6) Yard, foot, inch, pint, quart, peck, bushel, gallon, cent, nickel, dime, and dollar, and their abbreviations, learned by using the measures.

SECOND GRADE.

The second stage on the way leading most advantageously to a clear and cogent idea of number is that in which the pupil works with numbers which have to do with concrete things, the things being absent from the senses. This occupies a prominent place in the second-grade number work. The first two stages of the work having shown the necessity of a working familiarity with the number processes used thus far, sufficient drill work, drawn largely from the other subjects, is given to secure this end.

At the end of the second year the pupils are expected to know—

(1) Numbers, their notation and use, so far as is necessary for a full working comprehension of two-figure numbers. (2) Meaning of the "place" of a figure and the value of a digit as dependent upon its place. (3) Addition and subtraction facts applied to one-figure numbers automatically, and to a considerable range of two-figure numbers. (4) Multiplication and division facts implicit in the products of the multiplication table as far as the fives, inclusive. (5) All of the standard units of measure learned during the first year, as well as the rest of the units upon which the most important tables are based. The units of the metric system must be included. The tables are to be learned through use. (6) Meaning of the terms *addition*, *add*, *sum*, *subtraction*, *subtract*, *remainder*, and *difference*, secured through working with the ideas. (7) After children have learned the facts of (3) and (4) through the use of intrinsically useful things, free use is made of any available objects for drill work to such an extent as to render these processes sufficiently automatic to be of real practical value. Like all instruments for the accomplishment of human purposes, number is about as likely to be harmful as helpful, unless some degree of skill in using it is attained. So far from extending the grasp of the mental fingers, the mere manipulation of the tool may even cripple the fingers; and the sharper the tool, the greater is the danger. So long as the pupil is struggling to learn the tool and its use, it would be absurd to expect him to use it effectively. It is the skill born of interested practice which makes the successful baseball catcher. And so the aim of the teacher should be, not to eliminate drill in number-teaching, but rather to make it interesting.

THIRD GRADE.

Proceeding on the idea that sound number-teaching should start with objects requiring measurement, then pass to and through the consideration of numbers relating to things (the things not being before the senses), then to abstract numbers, and finally back to things again by means of a wide range and variety of applications to practical problems, is the rational order of steps. In entering upon the third stage the necessities for abstraction and generalization must receive some attention; and this is given considerable place in the third year. While the great danger in number-teaching is in overdoing *routine* drill in the earlier stages, it must not be forgotten that there is also danger of grave and unsalutary consequences from failure to give *enough* drill of the *right kind*.

The work of the third year is expected to accomplish a knowledge—

(1) Of notation and numeration of numbers of two and three digits; (2) of number facts of the multiplication table to the twelves, together with their division correlates, until they become intuitive; (3) the meaning of digit, factor, multiplication, multiplicand, multiplier, product, division, dividend, divisor, quotient, square, cube, and period (a group of three figures); (4) of all the tables perfectly through using them in measurement; (5) the metric system, mastered through use; (6) of many exercises in geometrical drawing and construction.

FOURTH GRADE.

During the fourth grade chief emphasis rests upon the teaching of common and decimal fractions, though much has been done in these subjects before this grade is reached. Enough of the preceding and succeeding arithmetical subjects must be taken up in the class-room to bring out clearly the organic relation of fractions to other topics.

The following requirements are to be met by the end of the fourth school year:

(1) The meaning of the following terms: fraction; common, proper, improper, complex, decimal fractions; numerator, denominator, terms of a fraction, multiple, common multiple, least common multiple, common divisor, least common divisor, and reciprocal of a fraction. (2) The principles in accordance with which the four fundamental arithmetical operations are to

be applied to common and decimal fractions, the pupils being guided to the discovery of the rules for applying these principles. *Rules must not be neglected, but rationally taught.* Similarly for the simplifying and reducing of fractions. (3) The least common multiple and greatest common divisor learned as a means to the necessary reductions of fractions. (4) An extended knowledge of the arithmetical equation and its uses, and also some practice in the handling of simple algebraic equations. (5) Much practice with simple algebraic exercises introduced in closest connection with the arithmetical exercises to which they are analogous. (6) Some training in geometrical drawing and designing. (7) Field work, such as ranging out, locating, and measuring lines, angles, and areas called for in nature study and geography.

FIFTH GRADE.

By the end of the fifth grade the pupil is expected to have gained—

(1) An easy mastery of the four fundamental operations as applied to fractions of all kinds, and that he has put into the form of algebraic equations many of the principles underlying the treatment of fractions. (2) Through proper usage, a correct terminology, which may be used henceforth in all mathematical work. (3) A fund of ideas relating to algebraic number and to the equation. (4) A practical knowledge of some fundamental principles of similarity and of their possible uses in surveying; also an acquaintance with many important geometrical figures met in field work. (5) The organic connection of percentage with common fractions; also the economic value of a knowledge of percentage, through nature-study problems, etc. (6) Training of the judgment through a critical examination into the relative merits of different ways of handling the same problems. (7) Through the indirect measurements demanded by field work, a feeling of the real need of the more advanced methods of geometry and algebra.

SIXTH GRADE.

By the close of the sixth school year the pupil is expected to have—

(1) A practical mastery of common and decimal fractions, simple, complex, and compound — so far as this has not been secured in the fifth grade; (2) a mastery of percentage through problems drawn largely from nature study, and of simple interest through the computation and use of interest tables; (3) an introduction to elementary topographic surveying, and considerable knowledge of how to represent objects to scale; (4) some first-hand knowledge of the relative advantages of algebraic over arithmetical methods of treating problems; (5) a sufficient knowledge of pure arithmetic for all practical purposes, and to serve as a sound basis for elementary

geometry and algebra; (6) a degree of facility in attacking a concrete problem arithmetically; (7) some power to analyze a concrete problem into its abstract elements.

SEVENTH GRADE.

During the seventh school year chief emphasis rests upon the transition from arithmetic to algebra and geometry. The arithmetic does not stop, but its main uses here are to throw light on the first steps into the more advanced subjects. Inference and generalization from arithmetical processes and principles are the central activity about which the year's work turns. The three subjects are carried along in about equal proportions for a time, the work in arithmetic consisting of a re-survey, as advance work requires, of whatever has preceded in the first six grades; the algebra consisting in the main of extensions of the principles of arithmetic, and the geometry of representations to the eye of the algebraic and arithmetical truths. Later the algebra and geometry assume greater and greater prominence relatively, and by the end of the year the work is practically elementary algebra and geometry.

This grade is expected to accomplish the following:

(1) A clear perception that arithmetic, algebra, and geometry are not essentially different subjects. The difference, so far as it exists, consists merely of extensions of the ideas and principles of arithmetic. (2) That some things can be done more easily by arithmetic, some by geometry, and some by algebra. (3) A knowledge of the methods of root extraction arithmetically, geometrically, and algebraically. (4) A knowledge of the laws of transformation and use of the simple equation in one or two unknowns. (5) A re-examination of arithmetical truths in the light of algebra and geometry. (6) Graphical representation of scientific and statistical data, together with the interpretation of the curves. (7) Continual use, as occasion requires, of all preceding principles. (8) A knowledge of the correct terminology of all subjects covered, this knowledge to be obtained through rational use of the ideas.

EIGHTH GRADE.

It is expected that the eighth grade will accomplish the following results:

(1) An adequate and final knowledge of the necessity and meaning of negative numbers and their relation to positive numbers; of the four fundamental operations as applied to the realm of positive and negative number; of the meaning and methods of transformation of simple equations in one

and two unknowns; of the graphical representation of simple equations in two unknowns. (2) The geometrical work consists in the demonstration of the properties of plane figures by induction and in the method of establishing equality by superposition, in proving the simpler principles of similarity, and in the exemplification of algebraic work. (3) A knowledge of the elements of descriptive geometry, so far as it relates to the construction of the plans and elevations of the simpler geometrical and plane sections of them. (4) A study of the geometry of the propositions of the "triangle of forces," of the "parallelogram of forces," of the "polygon of forces," of the laws of equilibrium, and other elementary questions of mechanics which depend for their proofs on simple geometrical considerations. (5) Great care is to be exercised that new pupils who are weak in their arithmetic shall make up these delinquencies before spending much time on these more advanced questions. (6) Occasionally the experimental bases of some problems will be supplied, but only so far as limited time will warrant. It is not the intention to make this work a course in elementary experimental physics, nor shall the thinking demanded by the mathematics of the problem be too seriously diluted with manipulation.

While it will not be possible for us to accomplish fully all the aims enumerated above with the new pupils, whose mathematical preparation is so varied and so poor as is at present the case, we must keep them in mind as the goal to be reached when pupils reach our work through our own channels. Furthermore, nothing has been said as to how the teacher shall present this work to her class, save that material shall be drawn at all times as largely as possible from the other subjects. Caution must here be given, however, against undertaking, during the short period assigned to number, to do all the experimental work from which the data of problems are to be derived. The number classes should not even be required to do very much of their collating of materials *on number time*. The data are to be drawn from the other subjects—to be gathered during the periods assigned to these subjects—and *merely discussed and reduced* in the number class. Any other means of collecting data may result in the teaching of physics or chemistry or nature study; but let no one deceive herself with the idea that she is securing mathematical results of any consequence. Naming a subject number because number is involved in it in a more or less indefinite and uncertain way is to caricature whatever virtue there may be in the idea of correlation.

These outlines are to be understood as merely setting in mathematical terms the goal to be reached from grade to grade in what is believed to be a rational and perfectly feasible course, leading to and preparing for the secondary school in such a way as to meet practical requirements of everyday life much better than does the usual curriculum, and to make the elementary and secondary schools organic parts of a homogeneous whole. It would be both unwise and impracticable to give to each teacher specific directions as to *how* each step is to be taken. To think out means for her particular grade is both the privilege and the duty of each teacher. What the subject-matter of mathematics is, and how it shall be presented from day to day, depends so largely upon what the other work is that the teacher who plans the other work is, in fact, the only one who can successfully deal with the question of the way the ends specified above are to be realized in her own grade. Successful correlation can accomplish the specified results, and to be successful correlation cannot be satisfied with less.

NOTE.—The work in applied mathematics, outlined last month, has been delayed by cloudy weather and other circumstances. It will therefore be finished during this month.

## NATURAL SCIENCE.

WILBUR S. JACKMAN.

### REVIEW OF WORK FOR OCTOBER.

The study has been based almost wholly upon the subject-matter furnished by outdoor observation.

1. A field trip to North Chicago gave opportunity to observe the development of a valley through erosion. This valley furnished fine illustrations of how plants colonize and adapt themselves to the varied conditions presented along the course of the stream.

The head of the stream is surrounded by a dry upland covered with fine grass. In one part of this there is a slight depression, which, though dry at the time of the visit, being covered with sedges and punctured with holes made by crawfish, bespoke the nearness of water. A few yards below, in the direction indicated by a shallow trough in the surface, running water appeared. A small pool that was formed was almost clogged with algæ and fine rushes. As the stream increased somewhat in size and by its winding formed miniature marshes, sedges, rushes, flags, cat-tails, and willows became more and

more abundant. The adaptations of the rush to the water, of the flags to the shallower parts, of the sedges to the mud, of the willows to the banks, were easily seen.

2. A second trip was taken with the grades to large swamp areas, for the purpose of noting something of the preparations being made by the plants and animals for winter. Great numbers of cocoons of the Crecopia moth and other insects were gathered from the willows and elsewhere. A few snails were gathered from the bottom of pools, but nearly all were too deep in the mud. Several belated frogs and two or three garter snakes were found, and one young but enterprising girl, working down almost an arm's length into a hole, drew forth a crawfish — the only one secured on the trip. A lucky throw of the dredge brought out a fine collection of leaches.

On the same trip many different kinds of seeds were found, most of which were ripe and were being disseminated.

3. The rooms are furnished with aquaria, insect cages, and vessels of various sorts adapted to the preservation of materials gathered. A review of the field trips and the study of the material collected have given rise to much reading, writing, drawing, and painting throughout the school.

The museum is provided with very large models of the silkworm, the snail, and the leach, and something has been done with the study of the anatomy of these animals which throws some light upon their habits.

4. With the members of the first-year class in the professional school some attention has been given to the sources of interest in nature for children as well as for themselves. A plan for recording the events of the season has been partially developed. Some instruction has been given in the use of different instruments. A skiameter (see October) has been constructed in the yard, and the readings have commenced. The temperature of the soil has been taken at different depths. Tables showing the results will be given in a later number.

The class has been representing the changes of the landscape by means of water-colors. For these lessons different views afforded by the scenery in Washington Park have been painted.

5. The second-year students have made preparations to teach in the eighth grade the general adaptation as illustrated by the changes in nature in this season. The points used are those suggested by the phenomena of migration, hibernation, etc.; the distribution of seeds; the development of bulbs and other underground parts; the fall of the leaf as a device of the plant to meet the exigencies of the season. These lessons include some work in meteorology.

6. The school building has a slightly sloping south frontage of one hundred and eighty feet. This has furnished a capital place for planting some bulbs for spring flowering. Nine beds have been prepared, one for each grade, including the kindergarten; and in each one, one hundred tulip bulbs have been planted. In addition, the pupils have planted about three hundred

daffodil bulbs and as many crocuses. The last are scattered at irregular intervals around the schoolhouse in the newly seeded lawn.

7. For the ensuing month the work will pursue much the same course. Additional records will be developed and results will be tabulated for further study.

## FIELD WORK.

IRA B. MEYERS.

### ANIMAL LIFE.

(For "Plant Life" see COURSE OF STUDY, Vol. II, No. 2.)

THE various forms of animal life of a region are as closely associated, in their habits and distribution, with the topographic features of the area they occupy as is the plant life. Lake, shore, marsh, stream, prairie, and woodland each has its particular animal society wholly characteristic, in its physiognomy, habits, and distribution, of the area it occupies.

In any area the factors most influencing plant structure, distribution, and habit are moisture, soil, light, exposure to winds, and surrounding plants — factors relating to nutrition and protection. In like manner, the conditions most influencing animal structure, habit, and distribution are those relating to food (its nature and location) and protection (against other animals and climatic changes). A seemingly slight change in the nature of the environment may have a determining influence on the character of the animal life: in a pond, the animals living in the water body and feeding upon floating food differ in physiognomy and habit from the life confined to the muck and ooze of the bottom; and both groups differ from the surface striders or swimmers. Equally characteristic of the area are the air-breathers — birds and mammals — according to their station or the section they patrol, whether running along the shore, wading along the water margin, swimming and diving, or flying over the water surface. Fully as characteristic are the animals located in the various environment aspects of mountain, prairie, and woodland.

Field work should afford students the opportunity of becoming acquainted with the living forms on various topographic areas, and of knowing something of their structures and habits

as related to their conditions of life. Great variety in animal forms indicate a great number of conditions for living; every aspect that meets the needs for living is occupied by its peculiar group. The correct interpretation of structure and habit is dependent upon a knowledge of function. Cages and aquaria may be made invaluable aids in the study of animals, by placing the forms under conditions as near like their habitat as possible. The environment of all forms of life caught in the field should be closely observed, and the necessary material collected for making them a comfortable home in the cage or aquaria.

DIRECTIONS FOR STUDY.

Use topographic map as suggested under "Plant Life." Make a list of the animals associated with each topographic feature — birds, reptiles, batrachians, etc. Show, by coloring your map, the particular part of the area they occupy. What particular feature has been most prominent in attracting each group to the area? Are any of the animals restricted to a particular aspect of the area? Are any unrestricted in range? Are any of the animals dependent upon a particular area for food, but able to pass from one area to a similar area some distance away; for example, from one pond or stream to another? Do any of the forms change their habitat or food at different stages in their development? Try to discover their homes, their methods of hiding and caring for their young; where and how they spend the winter.

REFERENCES. — Jordan, *Animal Life;* Thomson, *The Study of Animal Life;* Burroughs, *Squirrels and Other Fur-Bearers;* Weed, *Nature Biographies.*

## NORTH SHORE AREA.

### A STUDY OF A RAVINE AREA.

*Topography* (see geography outline).

NOTE. — The shores of Lake Michigan, north of Chicago, are cut by numerous ravines, the drainage courses through which the waters of this border area are carried to the lake. These ravines may be seen in all stages of development, from a shallow gully of a steep bluff to a mature ravine with a permanent stream. The area affords exceptional advantages for a study of the successive stages in the development of the topography and life of a stream valley.

DIRECTIONS FOR STUDY — PLANT AND ANIMAL LIFE.

Note the prominent topographic features *en route* from Chicago to the area studied; the characteristic plant life as related to the ridge, swamp, meadow, and ravine topography; animal life of the area traversed (wild and domestic).

I. *Head of Pettibone Creek.*—(This area was chosen on account of a few special features. The ravines of Lakeside, Glencoe, and Ravinia are equally instructive.)

1. Detailed topography of the area above the head of the ravine. (*a*) The dominant plants of this border area; their soil and moisture conditions—at time of observation, at beginning of growing season. What visible influence has variation in moisture conditions upon the plants of this area?

2. Forms of animal life common to this border area; those actually seen; those not seen, but their presence indicated by tracks, burrows, or nests. The special features—food, water, homes, hiding places—attracting the various animals to the area. Do these animals spend the entire year in this area? The food of these animals; their method of locating and prehending it. Is their food available during the entire year?

II. *Area between ravine head and intermittent spring area.*

1. Observe the exact changes that occur in the back area as the head of the ravine advances inland; in topography; in plant species; in luxuriance of plant growth; in evenness of distribution in the area. What factors, influencing plant growth, are modified by this change from a level to a ravine topography? Are the conditions more favorable to plants in one part of the ravine than in another? Consider direction of slope, steepness, base, and top.

2. Has the change to a ravine topography been favorable to any animals not found in the border area? Has it been unfavorable to any animals of the border area?

III. *Spring to permanent stream.*

1. Most noticeable influence of springs on topography, plant life, animal life. Plants found in this area and not common to any of the previous areas. Plants of this area common to former areas. What change in conditions has favored new plants? Do the conditions in any part of this area exclude plants found in the areas above this point? What influence has alternate flooding and drying upon the plant and animal life? Are any of the plants confined to a particular aspect of the area; around head of spring, in marsh below the spring, base of slope, top of slope?

2. Animal life found in the spring; forms living on the water surface or swimming through the water; those living on the bottom. Animals living in the marsh below the spring; those confined to the water; those alternating in and out of water; those reaching water by burrowing. The method of locomotion of these various animals; their probable way of entrance to the area; the nature of their food. (Secure living specimens for aquaria and cage study.)

IV. *Permanent stream area.*

1. Consider the various ways in which the stream has developed its topography; the plant life associated with each topographic feature at different stages of development. (*a*) Bare bluffs, caused by land slides on account

of basal erosion; plants first gaining foothold on this bared area; plants that succeed each other until the area reaches its highest stage of plant development. What changes in growth conditions occur at each progressive stage? Observe the use made of these bluffs by animal life. (*b*) Deposition of sediment forming a mixed clay, sand, and gravel flood plain; plants gaining a foothold on this area; succeeding plants, until the area reaches its highest stage of plant development. Compare with plant development of bluff. What factors of growth most influence the plants of the flood-plain area? Are these alluvial deposits used as feeding grounds, nesting places, or resting places by animals? (*c*) Lagoon from a deserted stream bed or cut-off: Plants first entering this area; compare with plants along the flowing stream; succession of plants in the dying out of the lagoon. Probable way in which these new plants find their way into the area? Animal life common to the lagoons; compare with permanent stream life; with the spring life. In what respects do conditions for living differ? Do the animals show any corresponding variation in habit or structure? Consider influence of current; gravelly or muck bottom; stagnant water; enemies.

V. *Stream mouth and lower flood plain area.*—(Stream bed cut to lake level; current stagnant one-fourth mile inland; wide flood plain.) Plants in the stream not found in the upper areas; floating, or rooted on the stream bottom. Compare the plants found on this level flood plain with the plants of the level area at the ravine head. In what respects do growth conditions differ? Be on the alert for indications of animals; look for tracks in the soft banks along the stream; explore the thickets for birds. Are the conditions more favorable to animals here than in the upper valley?

REFERENCES.—Salisbury and Alden, *Geography of Chicago and Environs;* Cowels, *The Plant Societies of Chicago and Vicinity;* Jordan, *Animal Life;* Furneaux, *Life in Ponds and Streams;* Gaye, *The Great World Farm.*

## GEOGRAPHY.

ZONIA BABER.

### OUTLINE FOR ELEMENTARY SCHOOL.

MOTIVE is the power which moves us on to definite ends. When we examine the motives that lead our pupils to accomplish their daily school work, we find results which are too often not flattering to our educational aspirations. The desire to please the teacher or parent, to receive certain credits, or to move into the next grade is the usual incentive which leads the pupils through tasks which have no appeal for them as

reasonable or necessary in the social organization. The recitation of lessons which have been definitely assigned to all the pupils from the same text seems useless to the student when there is no audience to appreciate or benefit by the effort.

To give motive for the work in geography throughout the school, and to afford the stimulation of an appreciative audience, it is proposed to give, late in the school year, a world's fair. The pupils of each grade, with the advice of the teacher, will choose the country which they wish to represent, and all the work of the year will point toward the exposition.

It is apparent that the plan for such expression will make demands on the pupils for the closest study of the country they select. The homes, the dress, the industries, the products, and the topography of the country must be studied. If possible, the music and speech of the people represented will be shown. Maps, paintings, drawings, models in wood and clay, and written work will be necessary for the making of an intelligent exhibit. When any exhibit is ready, the formal opening may be made at the time of morning exercises, at which all the school assembles.

It is rightly urged that true appreciation of the industrial movements of the world is obtained only by the engaging in similar industrial activities. And appreciation of one's physical environment is reached through contact with surrounding forms and forces. The school aims to help the child to grow into intelligent sympathy with his social, industrial, and physical environment. But even this is not enough. The yearly pilgrimages to Switzerland, Norway, the Himalayas — in fact, to mountains and seashores all over the globe — are attempts to satisfy a recently developed taste into humanity — the delight in landscape. The school, then, must help the child to an appreciation of the æsthetic in nature — a service which may be rendered through study of this region in the beauty of the varying seasons, and through photographs and projected pictures of the world's landscapes. In short, all scenery has become our scenery; the earth has become our individual farm; the seas our special highways and fishing grounds; all manufactures our

private concern; all peoples our kinsmen. Since the entire earth contributes to our well-being, we wish to extend the pupils' horizon to its circumference.

The world's geography, though complex in detail, may be reduced to very simple geographic controls. The land may be considered as hills, mountains, valleys, and plains; water areas, as lakes, rivers, and seas; the vegetation, as forests, prairies, and deserts; climate, as warm, temperate, and cold; the resulting industries, as farming, mining, fishing, lumbering, manufacturing, building, and commerce. Some aspect of each of these subjects may appeal to every grade, but the manner of approach in each will differ. Throughout the grades, during the autumn and spring, when the weather permits out-of-door study, excursions will be made to typical geographic regions: as to the ravine-cut bluff along Lake Michigan north of Chicago, where wave, stream, and glacier work finds expression; to Stony Island, where limestone in place is exposed, showing glacial striæ; to Dune Park, where wind work is strikingly displayed; to the Desplaines river, where a wide river valley and the canal are shown; to a farm, in both autumn and spring, to see the respective activities; to a swamp, to study undrained conditions; to Lincoln Park, for wild animals; the Chicago River, for a study of a harbor and a commercial highway, with its various kinds of bridges and bordering industries; to the drainage canal and the Illinois and Michigan canal, as types of open ditches and lock canals; to the Field Columbian Museum, rich in illustrative material, for various subjects. During the colder weather trips to the different factories can be made: as to the Pullman car works, the reaper and twine-binding manufactory, flour mills, etc. These trips furnish illustrative material for all subjects of study. (See outlines for science, history, and art.)

Stereopticon pictures, photographs, models, costumes, and products of various kinds from different countries will be used in all the grades. The laboratory, in which the physiographic processes of river action, the work of waves, currents, and wind, can be produced, will be used to illuminate the work. Maps, charts, globes, and books will also be constantly employed.

FIRST GRADE.

During the year the first grade will make such acquaintance with their environment as appeals to them. Lake Michigan, with its life and movement, is an attractive center. Considered as a highway, with its various kinds of boats; means of protecting life, with lighthouses and life-saving station; piers, cribs; the beaches; dunes; it affords abundant nutritive material. Of this lakeshore, with its accompaniments, the pupils will make a model.

In connection with their study of tropical foods the tropical vegetation in the conservatory will be studied. A swamp, a farm, and the Chicago River will be visited and considered.

SECOND GRADE.

During the autumn and spring the garden, the farm, and the local geography will claim principal attention.

In connection with the study of pastoral life in history, as represented by the Arabs and certain tribes of Persians, and in the literature (as, for instance, the story of Joseph), the study of deserts, semi-deserts, pasture lands, and some of the aspects of the Nile river and valley, will be necessitated. Certain aspects of Persian pastoral life may be dramatized, such as the tent-life and the weaving of rugs.

With the study of the hunter stage of human development the Eskimo, with his polar habitat, will be considered. This embraces the summer and winter appearance of Greenland, with its hills, mountains, glaciers, vegetation, and animal life; and the sea, with its ice-floes, icebergs, and life, as a hunting ground. The forest as a hunting ground, in a temperate and tropical climate, will also be considered.

Modes of transportation in this region and in countries previously studied will be compared: on Lake Michigan and the Chicago River by boats; on land by horses, various kinds of street cars, and railroads; in Greenland, by boats and by sleds harnessed to dogs; in Arabia, by horses and camels. In this connection the pupils will make such vehicles as they desire.

At the beginning of spring the pupils, in order to get an idea of different climates and different kinds of agriculture from their own, will plant cotton seed and sugar cane in the schoolroom. By correspondence with friends in southern Texas they will receive specimens of the cotton plant at different stages of development. And letters from southern states will show warm weather much earlier than here.

THIRD GRADE.

The third grade will study the geographic forms of mountains, plains, valleys, rivers, lakes, and seas in the different climates with differing vegetation, forests, prairies, deserts, through the study of animals and their habitat.

Lincoln Park furnishes live wild animals, while the Field Columbian

Museum has many stuffed specimens. The farm and Stock Yard pens will furnish our domestic animals. In studying the animals of the sea, for instance, the pupils will obtain as complete a picture as possible of the ocean, with its storms, icebergs, and ice-floes in the north, and the tropic life of coral, etc., in the equatorial region, with its rugged coast, or low sandy shores, with its fishing and whaling boats.

In the study of animals which live in forests, on the plains, in the mountains, or deserts, the habitat will necessarily be rather fully considered.

(The outline for the remaining grades will appear next month.)

## HISTORY.

EMILY J. RICE.

### LOCAL HISTORY.

ALL children strive to solve the problems that grow out of their daily living. The environment is the strongest factor in their education, and, instead of ignoring this factor, the school should supplement it and, by so doing, assist and regulate it. By means of what the child learns in school he may be helped toward a correct interpretation of the life outside the school.

The children of the primary grades should study society chiefly from the standpoint of its present condition rather than in its historic aspect. It is beyond them to appreciate the growth of social occupations and institutions. As they grow older they may be led, not only to see present conditions, but also to comprehend the evolution of the different functions of civic life. Whenever it is possible for them to take an active part in the improvement of any condition, they should have an opportunity to do so.

The following is a plan for the study of the immediate environment of our own school, the city of Chicago. It is intended to aid the students of pedagogy in their preparation for teaching history in the elementary school.

The relation of this plan to the course of study in history may be seen by reference to the article on the "Outline of History for the Elementary School," COURSE OF STUDY, Vol. II, No. 2, p. 110.

GENERAL REFERENCES: Kirkland, *History of Chicago;* Moses and Kirkland, *History of Chicago;* Moses, *Illinois, Historical and Statistical;* Andreas, *History of Chicago;* Andreas, *History of Cook County;* Ford, *History of Illinois;* Blanchard, *The Northwest and Chicago;* Blanchard, *Discovery and Conquest of the Northwest;* Mason, *Chapters from Illinois History;* Wright, *Chicago, Past, Present, and Future;* Shea, *Discovery and Exploration of the Mississippi Valley* ("Historical Classic Readings," Effingham, Maynard & Co.); "Fergus Historical Series;" Kinzie, *Waubun;* Parkman, *La Salle and the Great West;* Drake, *Making of the Great West;* Parton, *Captains of Industry* (Joliet); McMurry, *Pioneer History Stories;* Catherwood, *Heroes of the Middle West;* Catherwood, *Story of Tonty;* Bross, *History of Chicago* (Jansen, McClurg & Co., 1876); Salisbury and Alden, *The Geography of Chicago and its Environs.*

### I. INDUSTRIES.

1. Commerce: Kinds and amount of imports; kinds and amount of exports; means by which goods are received; means by which goods are distributed; transportation; relation of the situation of the city to its commerce; history of transportation.

REFERENCES: Adams, *Commercial Geography; International Geography,* p. 740; Salisbury and Alden, *The Geography of Chicago and its Environs;* Rand, McNally & Co., *Indexed Atlas of the World,* p. 356; "The Metropolis of the Prairies," *Harper's,* Vol. LXI, p. 711; Parton, "Chicago," *Atlantic Monthly,* Vol. XIX, p. 325; "Chicago as a Great Seaport," *Review of Reviews,* May, 1901; Knight, *American Mechanical Dictionary.*

2. Manufactures: Different industries represented; overcrowded occupations; value of occupation to other people; comparative wages; length of hours; danger of work; pleasure in work; division of labor.

REFERENCES: Adams, *Commercial Geography;* Carpenter, *Geographical Reader,* p. 225; Tarr and McMurry's *Geography,* p. 267; Bross, *History of Chicago,* p. 50; *Syllabus No. 2,* Committee of Sixty, Chicago Public Schools; Thurston, *Economics and Industrial History.*

### II. MEANS OF COMMUNICATION.

(1) Railways; (2) steamships; (3) mail service; (4) telegraphs; (5) telephones; (6) history of travel. Visit Field Columbian Museum.

REFERENCES: "Fergus Historical Series": No. 27, Beckwith, *Illinois and Indiana Indians;* No. 16, Wentworth, *Early Chicago: Fort Dearborn;* No. 1, Balestier, *Annals of Chicago;* No. 19, Cleaver, *Reminiscences of Early Chicago,* pp. 31, 51; No. 23, Ackerman, *Early Illinois Railroads.* "Father Marquette at Chicago" (*Old South Leaflets,* Vol. II, No. 46); Kinzie, *Waubun;* Bross, *History of Chicago,* pp. 13, 29, 32, 63, 121; Salisbury and Alden, *The Geography of Chicago and its Environs;* Moses, *Illinois, Historical and Statistical,* Vol. II, p. 104.

### III. FUNCTIONS OF GOVERNMENT.

(CARE THAT WE TAKE OF THE PEOPLE IN OUR CITY.)

1. Water supply: Source; means by which it is brought into our houses; relation to health of people; primitive methods of obtaining water;

story of the construction of the first crib and tunnel in Chicago. Visit pumping station and crib.

REFERENCES: Kirkland, *History of Chicago*, pp. 90, 184–9, 229, 230, 274, 275, 289–94, 391; Bross, *History of Chicago*, pp. 43, 119; Cleaver, *Reminiscences of Early Chicago*, p. 47; "Chicago Artesian Wells," *Bulletin of the Chicago Academy of Sciences;* Mason, *Water Supply;* Hazen, *The Filtration of Public Water Supplies;* Currier, *Practical Hygiene*, p. 285; "Water System of Chicago" (published by J. M. Wing & Co., 1874).

2. Illumination: Present methods; advantages of each and cost of each; history of methods of lighting; effect of light upon moral conditions.

REFERENCES: Bross, *History of Chicago*, p. 119; "Electric Lights," *Shop Talks on the Wonders of the Crafts*, Second Series (reprinted from the Chicago *Record*, 1896); Houston and Kenelly, *Electric Incandescent Lighting*, p. 13; Earle, *Home Life in Colonial Days*, p. 32; *The Evolution of Artificial Light* (published by the Union Pacific R. R., 1893—Chicago Public Library); Knight, *American Mechanical Dictionary*.

3. Streets: Plan of city; width of streets; kinds of paving; history of paving; street cleaning; stories of noted roads, as those of the Romans. Visit Field Columbian Museum.

REFERENCES: Andreas, *History of Chicago*, p. 56; Bross, *History of Chicago*, pp. 48, 118, 119; Cleaver, *Reminiscences of Early Chicago*, p. 29; *Shop Talks on the Wonders of the Crafts*, Second Series, pp. 176, 203, 239; Currier, *Practical Hygiene*, p. 155; Waring, "Street Cleaning in New York and Abroad," *Municipal Affairs*, Supplement, June, 1899; Campbell, "Road Construction and System of Control," *Sanatarium*, April, 1901; Shaw, "George Edwin Waring," *Review of Reviews*, Vol. XVIII, p. 682.

4. Bridges: Present appearance; artistic and inartistic examples; history of the old ferries and of methods of bridge construction; difficulty of reconciling the commerce of the river with the traffic of the city.

REFERENCES: Andreas, *History of Chicago;* Kirkland, *History of Chicago*, p. 52; Bross, *History of Chicago*, p. 24; Heck, *Iconographic Encyclopædia*, "Bridges;" Knight, *Mechanical Dictionary*, "Bridges;" *Universal Cyclopædia*, "Bridges;" Moffett, "The Bridge Builder" (Careers of Danger and Daring), *St. Nicholas*, Vol. XXVIII, p. 588; Woodbridge, "Bridges, Artistic and Inartistic," *Brush and Pencil*, September, 1901; Barnard, "The Brooklyn Bridge," *St. Nicholas*, Vol. X, p. 689; Stockton, "Personally Conducted," *St. Nicholas*, Vol. XII, p. 20; Walden, "The Story of an Old Bridge," *St. Nicholas*, Vol. XV, p. 277; Jameson, "The Evolution of the Modern Railway Bridge," *Popular Science Monthly*, Vol. XXXVI, p. 461, 1890.

5. Protection: (*a*) Fire: Appliances; stories of firemen and their work; taxation necessary for the support of the fire department; history of methods of protection from fire; relation of fires to modes of building.

REFERENCES: Blanchard, *The Northwest and Chicago*, p. 124; Fire Marshals' Reports; Andreas, *History of Chicago*, Vol. I, p. 220; Vol. II, p. 90; Earle, *Home Life in Colonial Days*, p. 15; *Britannica*, "Fire;" Moffett, "The Fireman" (Careers of Danger and Daring), *St. Nicholas*, Vol. XXVIII, p. 687; Hill, "Floating Fire

Engines," *St. Nicholas*, Vol. XXIV, p. 889, 1897; Morse, "Apparatus for Extinguishing Fires," *Popular Science Monthly*, Vol. XLVII, p. 477, 1895.

(*b*) Police: Duties; cost of maintenance; public institutions under their care; contrast soldiers at Fort Dearborn; the knight of the Middle Ages; the tithing man in New England.

REFERENCES: *Revised Code of Chicago;* Weeden, *Economic and Social History of New England;* Viollet-le-Duc, *Annals of a Fortress.*

(*c*) Sanitation: Sewerage; garbage; board of health.

REFERENCES: *Revised Code of Chicago; Report of Sanitary District;* Bross, *History of Chicago*, p. 120; Brown, *Chicago Drainage Channel and Waterway;* "Drainage Canal Machinery," *Shop Talks on the Wonders of the Crafts*, Second Series, p. 180; Waring, *The Sanitary Drainage of Houses and Towns;* Waring, *How to Drain a House;* Kober, "The Progress and Tendency of Hygiene and Sanitary Science in the Nineteenth Century" *Sanitarium*, August, 1901.

6. Buildings: Height of buildings; material allowed; space between buildings; lighting; height of chimneys; fire protection; fire limits; ideal tenement house; history of methods of building in Chicago — as balloon buildings, first stone houses, the sky-scraper — "Chicago Construction;" styles of architecture.

REFERENCES: *Revised Code of Chicago;* Bross, *History of Chicago*, pp. 116, 117; Cleaver, *Reminiscences of Early Chicago*, p. 39; Andreas, *History of Chicago*, p. 502–6; Kirkland, *History of Chicago;* "Modern High Buildings," *Shop Talks on the Wonders of the Crafts*, Second Series, p. 178; Campbell, *Household Economics*, p. 20; Currier, *Practical Hygiene*, p. 140; "Housing Problems in Cities," *Municipal Affairs*, March, 1899; Harder, "The City's Plan," *Municipal Affairs*, March, 1898; "Municipal Art," *Municipal Affairs*, March, 1898, and December, 1899; "The Coming of Garden Cities," *London Municipal Journal*, August 18, 1899; *The House Beautiful;* Shaw, *Municipal Government in Great Britain and Continental Europe;* Building Code Supplement to the *Economist*, Chicago, June 22, 1901.

7. Education: Schools; libraries; art galleries; museums.

REFERENCES: Moses, *Illinois, Historical and Statistical*, Vol. II, p. 988; Cleaver, *Reminiscences of Early Chicago*, p. 25; "Municipal Conditions," *Harper's Weekly*, Vol. XLV, p. 647; Shaw, *Municipal Government in Great Britain and Continental Europe.*

8. Recreation: Parks and playgrounds.

REFERENCES: Moses and Kirkland, *History of Chicago;* Report of Chicago Permanent Vacation School and Playground Committee of Women's Clubs, 1900; Zueblin, "Municipal Playgrounds," *American Journal of Sociology*, Vol. IV; American, "The Movement for Small Playgrounds," *American Journal of Sociology*, Vol. IV, p. 159; American, "The Movement for Vacation Schools," *American Journal of Sociology*, Vol. IV, p. 309; Milliken, "Chicago Vacation Schools," *American Journal of Sociology*, Vol. IV; "New York Summer Playgrounds," *Kindergarten Magazine*, June, 1899; "Children's Playgrounds," *Municipal Affairs*, June, 1898; Eliot, "Boston Metropolitan Reservations," *New England Magazine*, September, 1896; "Parks and

Playgrounds," *New England Magazine*, September, 1901; Tsanoff, *The Playground Movement* (Philadelphia, 1898); Will, "Playgrounds and Parks," *Arena*, 1894.

9. Improvement associations.

REFERENCES: Fuller, "Upward Movement in Chicago," *Atlantic Monthly*, Vol. LXXX, p. 534; Peattie, "The Artistic Side of Chicago," *Atlantic Monthly*, Vol. LXXXIV, p. 828; "Improvement Societies Meet," *School Weekly*, Chicago, October 11, 1901; Robinson, *Improvement of Cities and Towns;* Shaw, *Municipal Government in Great Britain and Continental Europe.*

IV. PEOPLE.

Earlier homes; earlier occupations; present conditions; foreign colonies.

REFERENCES: *Hull House Maps and Papers; The Commons* (published by the Chicago Commons); Woods, *The Poor in Great Cities;* Caryl, *New Era.*

## ART.

JOHN DUNCAN AND ANTOINETTE B. HOLLISTER.

THE drawing, painting, and modeling illustrative of geography and of natural science will, this year, be knit into the work of the classes in these subjects more closely than ever, the teacher of the subject-matter and the teacher of expression working together in the same recitation. This with a view to the enhancement of the thought and the gaining of greater spontaneity of expression. When the thought side of the work is detached from the expression, by the setting apart of special hours for drawing, the integrity of the act of expression is ruined, while the thought loses in force. It becomes necessary for the teacher of drawing to bring the student again up to the point of expression. And even were the teacher of drawing able to deal adequately with the subject-matter — which, of course, he seldom is — the arrangement of working separately would always be a very wasteful one.

*Geography.*— In the illustration of geography we use sand and clay as well as white chalk, colored chalk, and charcoal. It would seem to be wiser to begin with modeling rather than with drawing, the first being a simpler process than the other. Sand is used for the most rapid blocking out of topographic forms. It does not, however, admit of any delicacy of finish, and for more detailed work we set it aside and use clay instead.

When the student has attained some understanding of actual form, he is ready to attack the problems of apparent form — the representation of

modeled surface upon a flat surface, that is to say, perspective and light and shade.

Thus modeling prepares the way for drawing, the student proceeding from the more direct means of expression to the less direct; from the complete realization of form to the suggestion of it as seen from a given point.

This work in expression will occupy the periods on Thursday forenoons given in the program to geography. Some time may also be set aside in the afternoon for the making of modeled representations of typical scenery to be cast in plaster for the benefit of all the students in the class.

Miss Baber's outline for November shows the field we intend to cover during the month.

*Nature study.*—The nature-study period on Wednesdays will be given up to the painting of the landscape, bright with autumn coloring. Washington Park, which is within three minutes' walk of the school, is our "happy hunting ground."

## APPLIED ART.

JOHN DUNCAN, ANTOINETTE B. HOLLISTER, CLARA I. MITCHELL, ELIZABETH E. LANGLEY, ANNETTE BUTLER, IRENE WARREN.

### DECORATIVE PAINTING.

JOHN DUNCAN.

WE have taken up this work, as one of the main occupations of the afternoon, for two reasons: (1) It needs to be done. Our guide in the choice of what is to be done is to be found in what is needed by the community. If we could build ourselves a house, we would do that. This is as yet beyond us, but we can at least contribute something to the house we are living in, adding a last grace, it may be—at least inscribing upon it our own thoughts, making of its walls an appropriate background for our studies. The house must be painted and furnished, and much of the work in art and in manual training may here find an aim. We hope to form a little band of magicians, bringing light into dark places, and cheer into dismal ones, with the touch of the fairy wand—the paint-brush. No material of like possibilities is so cheap, and none is so misused, as calcimine color. (2) It affords excellent training, bringing all into service, each according to his skill, yielding work of various degrees of difficulty, and work calling for very various faculties—imaginative foresight, taste, ingenuity, and judgment, in the planning

of the work — and sympathetic co-operation, conscientiousness, and precision in the execution.

The task that we set ourselves is the decoration of the walls of the laboratory of the department of natural science. This we propose to decorate on the upper part of the walls with stencils of floral pattern, stenciling being the easiest process of wall decoration, and flowers yielding themselves most readily to treatment, more easily than landscape or animals. We may, however, try a small creature here or there, a squirrel, field mouse, robin, or katydid.

The students were first asked to study the problem and to make suggestions, orally, for the treatment of the walls, illustrating their remarks on the black-board. They were then directed to work up these suggestions into finished drawings, making schemes for the decoration of the entire room. These drawings were discussed in the class, the best one was selected, and the work was then divided up among the members of the class, each being held responsible for a part of the work in all its processes of design, stencil-cutting, and stencil-printing. This is as far as we have gone at this moment of writing.

The flowers will be arranged on the four walls according to their four seasons. The students who are happy enough to have to deal with autumn and winter will draw the material for their designs directly from nature — the few flowers that are left, and the colored leaves, fruit, nuts, and seeds offer abundant subjects for autumn, and we have a host of evergreens for winter. One or two of the summer flowers may still be had at the florist's, and other summer flowers, as well as those of spring, must be drawn from recollection, aided by photographs, lithographs, and engravings.

This work brings about a good deal of nature study in determining the season of the flowers, in studying the variety of them, and in bringing out their distinctive features in highly abstracted designs.

## MANUAL TRAINING.

IRA M. CARLEY, ELIZABETH E. LANGLEY, ANNETTE BUTLER.

THE first six weeks of the term the pupils will be occupied in planning and making things for use in the school. The remaining half of the term they will devote to the making of Christmas presents. In planning for the former work, the pupils of all the grammar grades were asked to suggest things which, in their opinion, would be of most use to the school, or which would add to its comfort and beauty. (It should be noted that the

building is entirely new, so that the opportunity is somewhat unusual.)

Some of the articles that seemed of most immediate need were: small bookshelves for each of the class-rooms, window boxes for plants, insect cages, ant-houses, insect cases for the museum, modeling stands for the clay-modeling room, clay-modeling boards for use in the class-rooms and for field and museum work, a small table for each class-room, furniture for the central hall (which is used for a museum and for social meetings), trays for serving luncheon, and metal pitchers for filling the painting cups. There are in the school three fireplaces; for each of these it was suggested that andirons, tongs, shovels, and fenders should be made. An outdoor gymnasium, consisting of climbing ropes, horizontal bars, vaulting bars, horizontal and oblique ladders, swings and see-saws, is to be constructed and set up.

After this list was made out, the things for which there was the most immediate need were assigned to the different grades according to the teacher's estimate of the ability of the children. The boys of the eighth and ninth grades agreed to be responsible for the outdoor gymnasium and the iron-work for the fireplaces; the girls of these two grades will make the bookshelves, serving trays, and insect cases. The seventh grade, both girls and boys, have the modeling stands in their care, and the fifth and sixth grades have the window and insect boxes.

In making plans for the various pieces of work, free-hand sketches (pictures) were drawn and corrected, or redrawn, until a satisfactory design was hit upon. Then the exact dimensions were laid off (usually full size on the blackboard), and the dimensions determined upon were noted down on the sketch, and from that a working drawing was made to a suitable scale. Besides the drawing itself, each pupil prepares whatever written working directions are necessary to show that he understands what he is to do, so that he may work intelligently in the manual-training room without constant direction.

The other points considered in preparing the plans are: the kind of material best suited to the particular piece of work, the amount needed, and its cost.

The work in the primary grades has been carried on in about the same way, except that the teacher decides to a greater extent what shall be done. After the class has discussed the form, size, and other features of the object to be made, a model is usually prepared for the children to work from.

The children are encouraged to work out their own ideas in making things appropriate for Christmas presents. They are given access to pictures and drawings bearing upon the subject, and, if possible, an exhibition of good, simply constructed pieces of furniture and metal work, and examples of basketry, pottery, and weaving, will be made at the school, to serve rather as suggestion and inspiration than as models to be directly copied.

## HOME ECONOMICS.

ALICE P. NORTON.

THE study of food and its nutritive value was the subject selected for the pedagogic class in the fall quarter. The work for October may be grouped under three heads: (1) the general discussion of food problems; (2) experiments with food materials; (3) the planning of work for the grades.

So far as possible, experimental work has preceded discussion and formed the basis for it. The isolation of the food principles from different foods has given a definite meaning to such terms as "proteid" that could not be obtained in a different way. The quantitative work has necessarily been rough, but results have been compared with standard tables, and sources of error discussed and recognized. The object of such work has been, primarily, neither accurate results nor training in method, but the formation of definite images in the mind of the pupil.

The topics discussed have grown one out of another. Each one has been taken up to answer questions suggested by the preceding.

The work in the grades is kept constantly in view. The suitability of different experiments for primary or grammar

grade, variations in method and detail for different ages and attainments, the relation of this subject to others, number problems that arise, reading suitable for children's use in connection with the work, are some of the points that receive attention.

OUTLINE OF WORK FOR READING AND DISCUSSION.

I. The classification of foods. (1) Inorganic: (*a*) water; (*b*) mineral matter. (2) Organic: (*a*) nitrogeneous — proteid, albuminoid; (*b*) non-nitrogeneous — carbohydrate, fat.

II. The composition of the body. (1) Elementary. (2) Proportion of water, proteid, etc.

III. The function of food. (1) General. (2) Function of each of the food principles.

IV. Income and outgo. (1) Comparison, in amount and composition. (2) Standard dietaries: (*a*) statistical and experimental methods of obtaining; (*b*) American and German standards; (*c*) variations from standard, influenced by age, body weight, climate, work performed, individual peculiarities; (*d*) calculation of dietaries; (*e*) use to be made of standards.

EXPERIMENTS.

I. Weigh out accurately 50 grams of flour into a dish previously weighed. Dry in the drying oven and weigh again. When dried to constant weight, calculate the percentage of water in the flour.

In a similar way find the amount of water in different fruits and vegetables, drying some in the oven and some in the air, and comparing results.

II. Burn in a crucible or evaporating dish, over the Bunsen burner, the flour dried in the last experiment. Continue the heating till no more change takes place. Weigh the gray ash remaining. What is the percentage of mineral matter in the flour?

III. Into 100 grams of flour stir gradually 50$^{cc}$ of water and work into a smooth dough. Wash the dough under water, continuing till the water runs clear. Test some of the first washings with iodine, and use the iodine test to determine when all the starch has been washed from the dough. Examine the gluten, noting its properties; then divide it into equal parts by weight. Dry one part in the drying oven, weigh, and calculate the percentage of gluten in the flour. Bake the other part in an oven hot enough for baking bread. Save and dry for future use some of the starch first washed from the flour.

IV. Grate a potato into cold water. Strain through coarse cheese-cloth. Examine the residue in the cloth. Allow the starch to settle, drain off the water, and dry the starch for future use.

V. Shake the yolk of an egg in a flask or bottle with a little ether or gasoline. Turn off the liquid, in a current of fresh air, upon a piece of filter paper, allow it to evaporate, and examine the residue. (This experiment was

done for the class. Great care must be used in handling the ether and gasoline, because of the danger of fire.)

REFERENCES: Church, *Food;* Goodfellow, *Dietetic Value of Bread;* Knight, *Food and its Function;* Hutchison, *Food and Dietetics;* Abel, *Lomb Prize Essay, The Rumford Kitchen Leaflets.*

## SPEECH, ORAL READING, AND DRAMATIC ART.

MARTHA FLEMING.

THE work of the pedagogic class will be centered around the children's work in the Elementary School.

The class is composed of groups observing and teaching in each of the grades. Each group will plan the lessons for the special grade of which it is a part. These plans, the selection of literature, the results obtained with the children, the united study of individual children, and the criticisms received on the work from critic and special teachers will be reviewed and discussed by the whole class. This discussion and review will give to the class the benefit of the work being done in all the grades, and put each member in touch with the whole school. The class will get its practice in both reading and oral reading by the study und interpretation of the dramatic literature selected for drill in each grade. In order to get the best preparation for the work with the children, they will study the stories used in the first, second, and third grades. The dramatization of those stories which lend themselves readily to this mode of expression, and the plans for carrying out the children's thoughts and emotions in dramatic form, will create a demand for some knowledge of the technique of the drama and the principles of dramatic construction and presentation.

During the month of October each member read aloud or recited some one selection, chosen by himself, to the class. On this recitation he received help and criticism from both teacher and class. We read and re-read *Hamlet*, and wrote the story on which the play is based. The story, as written by individual members of the class, varied in length from two to five minutes. The stories were read aloud, discussed, and everything not

necessary was sifted out. In this way the stories of several plays were told, and it became apparent that the story is the basis of every drama. By this work some sense of what is dramatic was developed, and some knowledge acquired of the characteristics of a story which is capable of dramatization. After this the class was divided into groups, and certain scenes of the play were assigned to each group, which then chose from among its number a stage manager. These scenes they will present to the class as best they can, suiting the action to the word. Discussions of the conception and the interpretation presented will follow. The drama is written to be acted, and acting it out is, therefore, not merely the best, but the only, way of realizing its significance — that is, its relation to life.

Once a week, at the Friday afternoon hour, we shall review the morning exercises of the week, noting what was good, and suggesting and discussing ways of making these exercises more effective and more uniform and helpful to the school. Members of the class will avail themselves of every opportunity to take part in the morning exercises, and will receive drill and criticism on their work whenever they feel the need of assistance.

Every recitation is a drill in public speaking, the class dividing itself naturally into speaker and audience, thus giving ideal conditions for acquiring skill in speech, voice, and gesture. Each speaks because he has something to say and is under the necessity of making himself heard and understood. This training may be made an organic part of the class-room work, requiring neither extra time nor special conditions. Under these circumstances it is our own fault if the children contract habits of mumbling, of indistinct, careless speech. Often we are not sensitive to faults and beauties of voice and speech ourselves, and do not demand the best from the children. To raise our standard is a part of the work of this department.

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Reading is thinking under the stimulus of the written or printed word or sentence. It presupposes a certain experience on a subject, and a certain capacity for tasting life. This

experience and capacity determine the value of the reading. The words or sentences are functioned when they call up images that have been in the mind before, perhaps in new combinations and new surroundings; for reading focuses all experiences on a subject. A book is a help to a further study of what has been seen, heard, or experienced. Reading is, then, an essential part of the study of all subjects. (See Mrs. Thorne-Thomsen's outline.) It gives the point of view of another mind, of a wider experience; or it may hold the special message, revealed to the poet, who sees farther and deeper than ordinary minds see into the relations of things — a message which cannot be defined or measured, yet which calls up the profoundest emotions and inspires the noblest action. A book widens our horizon by helping us to know life in a far broader way than would be possible in our limited environment; it helps us to interpret its meanings and to create and share its joys. In these days of the multiplicity of books, the temptation is to skim over a great many and really read but few, or, as someone has paradoxically said, to read too much and think too little. The habit of using books in this way, formed usually in childhood, becomes a sort of dissipation, a menace to the real growth of the individual, and to that personal power which is the outcome of independent thinking. The difficulty in the way of right reading, however, lies not in the number of books, but in the lack of preparation and adequate motive for their use, in trying to make them take the place of the observation and the study of things.

To have actual knowledge of literature or of the contents of a book one must experience it in expression. This experience may come through speech that is one's own language, through painting, writing, modeling, or making. Reading aloud is only one means of getting this experience.

The real trouble with much of the oral reading of our children is that they have no images to express and no motive for expression. Reading aloud should rouse in another mind images corresponding to those in the reader's mind, and give to others help and pleasure. The desire and effort to do this react on the reader, stimulating him to clearness and distinctness of

thought, and to a closer study of the text. In oral reading those to whom the expression is addressed are near at hand, and if response comes at once from this audience, it reacts upon the reader again as a further stimulus to thought, becoming to him a means of self-criticism, a measure of the adequacy of his expression. This testing of expression by the effect upon the audience the children may learn to apply at once to their own oral reading.

References in history, science, or geography will be carefully examined, and such as are suitable and adapted to the skill of the children will be read aloud by the class. In this exercise the only book used will be in the hand of the reader, the rest of the class becoming for the time being listeners, imaging under the stimulus of oral language. Stories will be read aloud in the same way. For the purpose of gaining strong, vivid images, and of training the emotions and acquiring skill in speech, voice, and gesture, there will be kept before the children, for drill each month, a dramatic selection of prose or poetry, or a drama — something beautiful. This drill means training in thinking. It means that the children will be led into the fullest possible appreciation of the text, that they will be so full of its meaning and its beauty that expression will be, not only a joy, but a necessity. Drill trains each one to be himself, to express only what he sees and feels as he sees and feels it. By drill the words and literary forms have been closely related so often to the thoughts and emotions that both are indissolubly associated: the one demands the other; by force of habit the words and phrases call up the thoughts and emotions.

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The harvest thought is running through all the grades. Each grade is studying fruits and seeds, their habits, preservation, and uses. Thanksgiving is the culmination of this study. It is also an organic part of the life of the children outside of the school. It is in the home life; it is celebrated by church and state; and we cannot escape making it an integral part of the school work, except by divorcing the school from life.

Shall we, then, for the sake of carrying out a fixed program on some subject, lose the opportunity of directing this common sentiment into artistic expressions and altruistic actions, which is really the broadest, deepest, study of any subject?

The harvest feast, like all festivals, grows out of some exalted emotional excitement which is concentrated in this social function, lifting life for the time being up to an ideal plane. All peoples—savages, barbarians, and civilized—have recognized some supreme being who ripened the grain and purpled the grape, and so gave meat and drink to them and their children. In honor of this being they have with common interest and unity of thought held periodical celebrations, holy convocations, feasts of rejoicing. The conception of this feast entertained by different peoples at different periods, and the different manners of celebrating it, are fruitful sources of study, and will grow naturally out of the activities which are going on about the children, on the farms and in the homes.

The preparation for the celebration is quite as important as the feast itself. In this, all work together with one common interest and purpose. The committee in charge of the plans for our celebration suggests the following study:

> Thanksgiving in America, including the celebrations of the colored people of the South. The first Thanksgiving in America. The Indian feasts as observed by the Iroquois nations. The harvest feasts of some of the primitive peoples. The oriental feasts. The feast of Dionysius. The feast of the Tabernacles. The old English harvest home. The vintage feast of France, Germany, and southern Europe.

The study of these subjects has been assigned to different grades in the school and, where possible, fitted to the regular program of the month. For example, the fifth grades in the School of Education and in the Francis W. Parker School are studying the early colonies of New England. Naturally, the first Thanksgiving in America has been assigned to these groups.

After study of these subjects the children and the teachers will together select that which seems to them best suited for public presentation. They will also decide what modes of

expression will best tell their stories—procession, pantomime, drama, story, painting, or other art.

Arrangements have been made for placing in cold storage branches of oak, sumac, bittersweet, wild-grape vines, bunches of mountain-ash berries, and grapes, for the decoration of our hall.

## MUSIC.

HELEN GOODRICH.

### I. THANKSGIVING PROGRAM.

THE Thanksgiving program calls for varied expression in music. *Ensemble* songs will be chosen from the lists given below, and will include "Harvest," "I Will Praise Thee," and "We Plough the Fields."

The special music used during the dramatic representations illustrates the spirit of the action, or adds to the actual details of the pictures. There are processions to be accompanied, pantomime to be interpreted, dramatic action to be carried out with singing, as a species of dialogue, and songs to be sung to give point or "local color" to the various scenes.

The modern music used, expressing in a general way our modern sense of the scenes presented, belongs to a large extent to the background, chiefly defining and emphasizing the rhythmical feeling of the processions, or heightening the general effect of the thought expressed. For instance, the music to be played for the entrance of the Greek maidens is a graceful, rather intricate, melody by Jadassohn. It presents a light, perfectly balanced onward movement, in which the accent falls to each foot alternately, producing an extraordinarily smooth, steady, flowing rhythm, and *recalling none of the modern dance steps.* The "Marche religieuse," by Mozart, is suitable for the entrance of the priest, and a song by Beethoven, "Opferlied," is suggested as expressing the spirit of the sacrifice scene in a very simple, direct, and beautiful manner. The text represents a Greek youth sacrificing to Zeus and praying that he may have added unto him not only The Good, but The Beautiful. Such music, if played with a sense of its meaning, even though somewhat crudely, must be useful for children to hear, and especially in connection with a scene which gives a hint of its meaning in a not too subtle, and yet not obtrusive, manner. Perfect in melodic and rhythmic beauty, dignified even in its lighter phases by reason of its perfect proportions, and, beyond everything, filled with a reverence for lovely and lofty ideals—such music is surely needed among us.

The "English Harvest Home" may be supplied with music which is very

nearly historically correct, and at the same time pleasant to our more developed sense of melody. The "Cushion Dance" (see music in this number) is a characteristic English dance tune of the seventeenth century. The dance is very nearly as follows: All sit or stand around the room; the dancers begin by a single person, who takes a cushion, dances slowly about the room, and at the end of the slow part of the tune stops before the chosen partner, kneels, and salutes; they join hands and dance away to the second part of the music; the rest follow, in the same manner, each couple joining hands with those preceding, until all are in the circle; a procession is then formed, the first couple bearing the cushion aloft, leading out. The spirit of this dance would vary with the people who danced; it was equally popular in city and country, among high and low. Songs and dance should be accompanied either by flute or violin, alone or with piano.

### II. SINGING IN MORNING EXERCISES.

Singing in morning exercises is to be kept as far as possible removed from the set and formal. The opening hymn or sentence will seldom be omitted, but such an occasion as Hallowe'en, Saint Valentine's day, or a dramatic entertainment might do away with it. The selection of the other song or songs, usually sung after a reading, will be guided by the spirit of the occasion, the effort being to reflect the feeling of the moment, not necessarily to relate the subject closely. A grade, a group, or possibly an individual may be called upon in cases where no fitting *ensemble* song is ready, or it may be omitted altogether when the unity of the program is better preserved without it.

### III. THE BOY'S VOICE.

The question with regard to the boys in the school whose voices are changing has been settled for the present, theoretically, and a plan for practical work made. They are to be given work to tide them over this period when all profit and, usually, all interest and pleasure in music must come to them from some other source than their own singing. The rough, unpleasant character of their voices and the precariousness in controlling them make the normal boy revolt from an effort which is obviously unlovely and may prove absurd. The feeling of freedom to sing or not to sing in morning exercises results in many, if not in most, cases in an attempt to learn all the songs, and to sing those which are liked and which lie within the very restricted compass of their voices. "Basses" and "tenors" of from thirteen to sixteen are of course musical impossibilities. The attempt to sing high or low notes, in the congested condition of the vocal cords, results in unnatural tension and may produce severe inflammation. This consideration alone forms an insuperable difficulty in the way of quartet singing. A collection of the opinions of celebrated English choirmasters and teachers gives some decisive testimony. One hundred and fifty-eight out of one hundred and ninety say that it is decidedly unsafe for a boy to sing while

his voice is breaking. (Reference: *The Child's Voice.*) While it is, therefore, important for a boy with a beautiful voice and musical nature to give his voice as much rest as possible, it is not necessary to forbid others — many of whom habitually shout on the playground until they are hoarse — to sing when so disposed. It would be rare, indeed, to find a boy of this age who would of his own free will strain his voice in singing. The quality of the chorus tone will be impaired when he does sing. But that must be considered of minor importance.

### IV. INSTRUCTION IN THEORY OF MUSIC.

This quarter's work will consist in making some supplementary song-books for the school. Manuscript books will be furnished, and a collection of melodies and words of songs not available to the school in any other way will be made. This work will involve the taking of dictations from the teacher's voice or piano, and will lead back into some fundamental work in scale-formation, interval-relations, and time, besides a thorough familiarity with musical symbols necessary in sight-reading. The collection will include all songs published in the COURSE OF STUDY, some as yet in manuscript, arrangements and other raw material collected from time to time.

During the year a short course in the physics of sound in its relation to music will be taken up in the science department. Some knowledge of the scientific side of musical theory may, when the distinctly musical interest is lacking, furnish a basis of respect for this art which is most valuable in later years. An element of this nature in our work would tend to be helpful in the development of a better musical standard than our present one. A course will be organized by the two departments concerned, and will be published in the January number of the COURSE OF STUDY. It will include experiments affording training in fine discriminations of pitch, harmony, and tone-quality.

### V. SONGS.

"Harvest," "Harvest Song," "Harvest Hymn," *Songs of Life and Nature*, Eleanor Smith; "We Plough the Fields," *Songs for Little Children*, No. 2, Eleanor Smith; "Thanksgiving Ode," *Modern Music Series*, Third Book; "Thanksgiving Song," *Modern Music Series*, First Book; Sentence, "I Will Praise Thee," *Seven Sentences*, Mrs. Crosby Adams (Chicago).

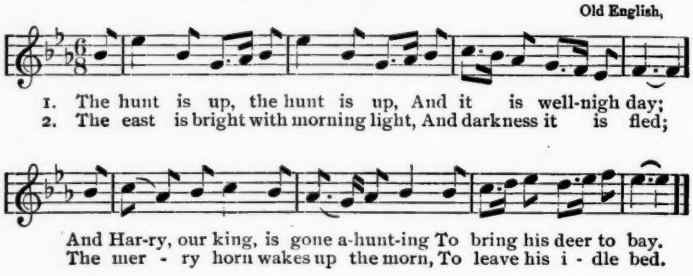
### VI. INSTRUMENTAL MUSIC.

"La Sylphide," Jadassohn, COURSE OF STUDY, Vol. I, No. 5; "Marche religieuse," Mozart (Collection Litolff, *Marsch-Album*); "Opferlied," Beethoven (Peters's edition); "Primitive Themes and Rhythms," Parry, *Evolution of Music;* "Old English Songs," and dance, COURSE OF STUDY, present issue (see Chappell, Naumann, Crowest, histories of music).

REFERENCES: Leopold Wagner, *Manners, Customs and Observances* (contains information about music used during festivals); Behnke and Brown, *The Child's Voice* (A. N. Marquis & Co., Chicago).

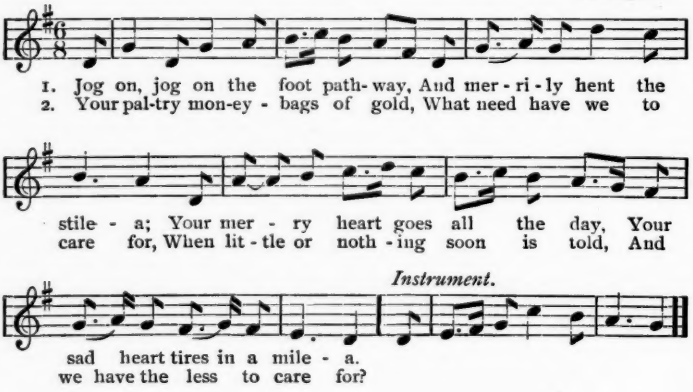
## THE KING'S HUNT IS UP.

Old English.


1. The hunt is up, the hunt is up, And it is well-nigh day;
2. The east is bright with morning light, And darkness it is fled;
And Har-ry, our king, is gone a-hunt-ing To bring his deer to bay.
The mer - ry horn wakes up the morn, To leave his i - dle bed.

## JOG ON.

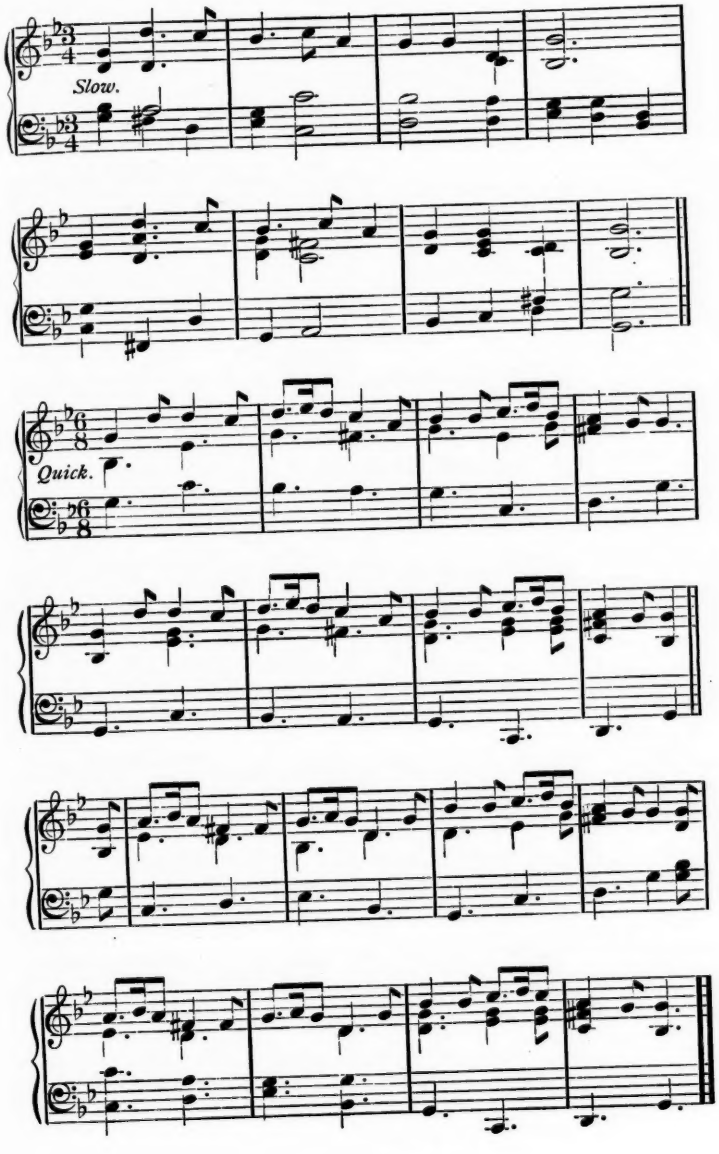
Old English.


1. Jog on, jog on the foot path- way, And mer - ri - ly hent the
2. Your pal-try mon-ey - bags of gold, What need have we to
stile - a; Your mer - ry heart goes all the day, Your
care for, When lit - tle or noth - ing soon is told, And
Instrument.
sad heart tires in a mile - a.
we have the less to care for?

## THE CUSHION 'DANCE.

English, 1686.

Hark, they're all on the hoigh;
They toil like mill-horses, and turn as round;
Marry, not on the toe; aye, and they caper,
But not without cutting; you shall see, tomorrow
The hall-floor peck'd and dinted like a mill-stone,
Made with their high shoes; though their skill be small,
Yet they tread heavy when their hobnails fall.

—Sir Francis Heywood.

Slow.
Quick.

# PHYSICAL TRAINING.

CARL J. KROH, FRANCES MUSSELMAN, AND CAROLINE CRAWFORD.

ALL forward impulse in the direction of progress depends on how vividly the difficulties in the way of whatever we undertake are realized. Success in the physical training of children means more than mere interest in technical equipment and proximate estimates of results gained from a working knowledge of gymnastics. It presupposes, rather, a keen appreciation of the wherewithal, without which failure becomes imminent: information acquired in investigations of effects of exercise; skill in the interpretation of conditions and the application of sound principles; enthusiasm, sympathy, tact, and ability to direct profitable and beneficial work through intelligent procedure.

The most interesting problems of school life are those of conduct. The disconnected and ordinary phraseology on matters pertaining to the interrelation of mind and body, and to their various activities, has been supplanted by a clearer conception of the laws and sequential order of growth and development. A keener appreciation of the fact prevails that many of the most interesting problems in education must remain unsolved without the most searching and painstaking study of the physical as well as mental characteristics of the pupils and their environment. The study of conduct can become an art only through the most conscientious application.

Physical training has been defined as the greatest possible economy of time and mental energy. The import of the statement is revealed only in the results of prolonged and persistent actual effort.

With the refinement in sense-perception and the accompanying central changes comes a corresponding increase in the control of motor elements, and in these latter an increase in the strength, accuracy, and readiness with which they respond.— *Donaldson.*

All that is clear is that there is a tendency, a probability, greater or less, according to circumstances, but always considerable, that the descendants of cultivated parents will have, by born nervous organization, a greater aptitude for cultivation than the descendants of such as are not cultivated, and that

this tendency augments, in some enhanced ratio, for many generations.—*Bagehot.*

Gymnastics proper deal with movement concepts, and their correct interpretation and expression. Their immediate purpose is to develop, in the most efficient way, neuro-muscular power by obviating all unprofitable tendencies. Their ultimate purpose is a refinement and strengthening of the receptory, as well as executive, faculties toward accurate and prompt co-ordinate action for the promotion of health, and toward useful ends, toward the most enduring self-activity. As an educational discipline their value can be estimated and determined solely from a pedagogical point of view.

Action, as contrasted to still-life, always enhances our interest. We may liken the difference between mere movement concepts and their actual reproduction to the difference existing between the study of physics from a text-book and the study of the subject in the laboratory. The former method not infrequently presages resultless effort, while the latter reinforces clearness of concept. No amount of imagery can appeal to us in any other but a vague way, if we fall short of a realization of its purpose.

The power-index of a pupil is best judged in action. The media for acquiring and expressing power—the organs of contact and action, the senses—trained through functioning to convey clear and accurate concepts, represent the highways for intercourse between mind and body. Through our perceptions of form, of posture, movement, direction, and our conception of space, time, and force, we continually gather and store experiences. These latent experiences are recalled, whenever needed, without a moment's loss and with a considerable reduction of the nervous force originally expended in their acquirement. The time for this acquirement is during the formative period of school life, during which the physiological epochs determine the selection and adaptation of appropriate means of training.

Familiarity with these means is of first importance. It implies a classification of the various forms of exercise with reference to their values and a knowledge of their systematic

relationship. The adaptation and use of means with reference to age and sex present the most important aspect of the student-teacher's preparation.

(For outline work see Courses 1 and 2, COURSE OF STUDY, Vol. II, No. 1.)

## SPORTS, GAMES, AND PLAYS.

### THREE-DEEP.

An even number of players, from twenty to forty, is formed in a double circle in close order, and facing the center, with space enough left and right of each pair to allow the respective runners, placed on the outside and at some distance apart, to turn and move about in all directions. One of these players, the "tagger," seeks to tag or tap the other before he can secure a place in front of any of the pairs forming the circle. If he succeeds, rôles are changed, the player tagged becoming tagger, and the former tagger in turn endeavoring to secure a place in front of some one pair. If, however, the pursued player succeeds in reaching a place in front of a pair before he is tagged, then the hindmost player, *i. e.*, the last, or third, in the respective rank, takes to his heels and seeks to evade the unsuccessful tagger, who now turns his attention to him. In seeking to evade a tagger the successive players may run in any direction, either left or right, through and across the circle, without, however, passing in front of any of the players in such a manner as to induce wrong starts. The hindmost player may also form in front of his own rank, making the second player in such rank hindmost, or third. The play is always directed toward the outer player in "three-deep," two players only being allowed in each place.

In learning the game the players should be cautioned to run either to the left or right, and on the outside of the circle and around it only. The formation of a single, instead of a double, circle will facilitate the learning of the game by the younger pupils. Running in all directions should be permitted only after the simpler forms of the play have been successfully practiced.

Variations: The players may change the order of formation by facing outward from the center, the pursued player forming in the rear instead of in front, the front player taking the part of the third or hindmost player. The front or outside players may grasp hands, the second players placing hands on shoulders of those in front of them; the second player pushes the front player away in time to prevent his being caught, *i. e.*, immediately when a third player enters the circle and places hands on *his* shoulders. Entry into the circle must not be hindered.

A circle of pairs may also be formed in such a manner that the players face each other, the pursued player taking his place between the players the one on whom he turns his back becoming "third." This form can be

played, by expert players, in other than circle formations — in random formation, pairs scattered *ad libitum* — as the players may choose.

Another way is to form two ranks, one on each of opposite goals, twenty or thirty paces apart. A player steps out toward the opposite goal to strike one of the hands held out toward him. The player tagged becomes pursuer and tries to catch the other before he can return to his line. If he succeeds, the player caught goes to his goal and the successful catcher continues the play with his victim's goal. This form leads to the game known as "prisoner's base."

In the first description of the game various exercises can be introduced for boys, as jumping or straddling over each other, or gliding to place between the feet of the front players standing in stride position. In a spirited game it is not necessary for a runner to stand in front of a pair, it being sufficient for the runner simply to touch base, *i. e.*, the place in front of a pair, with hand or foot.

The game can also be played by a number of double circles, each group of players having its own representatives, who are not restricted, however, to their own group, but who run from group to group.

## APPARATUS GYMNASTICS.

(For reference throughout the year.)

### HORIZONTAL LADDERS.

*Apparatus.*— Four horizontal ladders, parallel, adjustable to needed heights; space between ladders, sixteen to twenty inches, permitting the use of beams for "stem-support" exercises; length of ladders, twelve to eighteen feet.

*Class formation.*— Four files of ten or twelve pupils each in "flank order," at a distance from and facing the ends of the ladders; sufficient space between ladders, files in "front order" between same.

*Marching order.*— Pupils leave head of files to take positions either under nearest or "off-ends" of the ladders upon the command "March!" (turning about to face the class in the latter case), and return to rear of files upon leaving apparatus, passing left or right flanks, the next rank in order advancing. Files take a step or two forward with each succession.

### I.

*The following exercises can be executed by several ranks simultaneously.*

[Commands: First four ranks, forward — march! Left about — face! Raise arms forward, on tip-toe — stand! Lower arms into position backward and bent-knee position — stand! To hang-support position, arms extended — spring! *Or*, 1, 2, 3! Down! Up! Down!]

A. EXERCISES FROM "CROSS-STAND" POSITION.[1]

Spring to "hang-support" position, arms extended, beams grasped outside — 1, 2, 3! Down! (Alight to bent-knee position.) Up! Down! Repeat several times, alighting on the same place each time — chests "active," body erect. Avoid swinging. [March!]

(Ranks form in proper order, rear of class, next ranks advancing.)

Same, grasp rounds, over-grasp (fingers over and thumbs under rounds).

Same, grasp rounds, "under-grasp" (hands reversed).

Same, grasp beams inside, "ulnar grasp."

Same, grasp beam outside with left hand, round (over-grasp) with right hand.

Same, beam right hand, round left hand. Etc., etc.

[Any two (or more) grasps may be alternated.]

B. EXERCISES FROM THE "SIDE-STAND" POSITION.

Spring to hang-support position, arms extended, over-grasp on beams.

Same, under-grasp.

Same, grasp rounds (one round between rounds grasped), palms turned inward.

Same, grasp rounds, ulnar grasp, palms turned outward.

Same, grasp round with left hand, beam with right hand.

Same, grasp round with right hand, beam with left hand.

[Any two grasps may be alternated.]

Exercises may be repeated by springing to hang-support positions with arms bent; or, arms are bent from "stretch hang position."

II.

*The following exercises may also be executed by several ranks simultaneously.*

Spring to hang-support position, arms extended, beams grasped outside — 1, 2, 3! Lift hands alternately — begin! 1, 2! Down!

Repeat exercise with hand-grasps, as under I.

Repeat exercises, alternating various hand-grasps. [Exercise: Change from outside to inside grasp (on beams) and back (left and right alternately) — begin! 1–4! Or, change from beam-grasp to round-grasp, etc.]

III.

Travel forward in hang-support position, grasps as under I, A.

Travel sideward left, grasps as under I, B.

Travel backward, grasps as under I, A.

[1] Cross-stand, or hanging position: breadth of pupil (horizontal axis — from shoulder to shoulder) and beams of ladders at right angles.

Side-stand, or hanging position: breadth of pupil and beams parallel.

Travel sideward right, grasps as under I, B.

Repeat exercises under III, arms bent.

Repeat exercises under II, lifting hands simultaneously.

Repeat, alternating grasps (lifting hands simultaneously); (*a*) arms extended; (*b*) arms bent.

*Exercises to be executed in the "still-hanging position."*

Raise knees forward alternately; ditto, legs (extended) alternately; raise knees and extend legs alternately; raise knees simultaneously; ditto, legs; raise knees and extend legs; stride-swing "forward-backward;" ditto, sideward; swing legs upward alternately, sharp thigh-flexion to various angles, touching rounds; same, both legs. Turn trunk left and right alternately. Trunk-turning exercises in connection with leg exercises.

Exercises can be executed in connection with grasp-changes in place, and with movements from place, forward, backward, and sideward left and right — "traveling."

In positions under I, practice *swinging* (short-swinging), forward and backward, sideward left and right; (*a*) arms extended; (*b*) arms bent.

Repeat exercises under II, swinging.

Repeat exercises under III, swinging.

Repeat alternate simultaneous grasp-changes, swinging on place — end of forward and backward swings.

Repeat alternate simultaneous grasp-changes, swinging from place, forward, backward, sideward.

Raise legs and stem feet against rounds (knees bent); travel headward, stepping from round to round.

Same, in opposite direction.

Same, but place legs over beams; travel headward. Same in opposite direction.

(Movements similar to walking or stepping up vertical ladder with alternating hand-grasps.)

CIRCLING; *backward and forward — about horizontal axis.*

Hang-support position, arms extended:

Raise knees, height of chest — one! Circle backward (half-circle) to drop-hang position — two! Extend legs (between rounds) — three! Resume first position — 4, 5, 6!

Raise knees — one! Circle to hang-support position backward — two! Stretch knees — three! Down — four! (Alight to bent-kneeposition, trunk erect, and resume fundamental position.)

Circle backward to drop-hang position with legs extended; bend hips (legs above rounds); secure foot-grasp under and around beams (outside); draw the body up between rounds to stride-sitting position on the ladder. Resume hanging position same way.

Circle to "front-stem-support position" on (above) ladder (body extended backward, hands and feet on beams of ladder); travel forward. Resume hang-support position end of ladder.

Circle to stem-support position; change to *side*-stem-support position, right side of ladder; lower body (bend arms) to side-hang position; travel sideward right to end of ladder, lifting both hands simultaneously. Same, but lower body left side; travel left.

(First exercises are executed center of ladders; last three exercises from end to end of ladders.)

## OUTLINE FOR PRIMARY GRADES, AUTUMN QUARTER.

CAROLINE CRAWFORD AND FRANCES MUSSELMAN.

### FIRST AND SECOND GRADES.

I. (1) Imitation games, plays, and stories. Example: "There Were Two Blackbirds," "Sing a Song of Sixpence," "Jack be Nimble," "See Saw Marjery Daw," etc. (2) Animal plays and games. Example: Imitation of birds, rabbits, bees, kittens, etc.

II. Marching with music. Changes of rhythm in simple file marching.

III. Greek games. (1) Running in following forms: Running games, short-distance runs, relay races, and group running. (2) Vaulting on low bar, with assistance. (3) Climbing, preliminary climbing exercises on rope-ladder and rope. (4) Jumping. Preliminary mat-jumping, followed by height-jumping less than eighteen inches. (5) Hurdling. Exercises with one hurdle, not higher than one foot. (6) Throwing with bean bags and small balls.

IV. Rhythm: Running, skipping, hopping, and sliding with change of time.

### THIRD AND FOURTH GRADES.

I. Simple marching, with and without music in file, in columns of two or more, and in groups.

II. Free exercises combined with marching: Simple arm, head, leg, and body movements.

III. Greek games, same as under first and second grades, with more attention to execution.

IV. Rhythm: Running, skipping, hopping, sliding with point position, singly, in twos, fours, and groups.

### INDIVIDUAL GYMNASTICS.

All pupils will be measured and examined, and special prescriptions will be carried out not less than three times a week by all children whose condition indicates the need of special, individual corrective gymnastics.

## KINDERGARTEN THEORY.

BERTHA PAYNE AND ANNE ELIZABETH ALLEN.

THE work for October has been a review of plays and games, with a view to finding the function in general of play. The traditional games were collected, examined, and compared with each other to find the aim or point of interest in each, and the essential elements in all. Froebel's games were compared with them. The results of the class work on this topic will be given in a later issue. During November children's toys, playthings, and their own inventions of a constructive nature will be studied.

The division of a child's activity into such classes as play, games, work, constructive play, or dramatic play is more or less artificial. Fundamentally all are one, and yet there are differences upon which we can make a rough classification that is a convenience in study. If these classifications are helpful at all, they must help one to see the demands made upon a child's body and mind by each characteristic form of activity; for if the demands are found to vary, and to vary greatly, an alternation in the forms of play or work will de found to be economy of energy, and also to keep up a balance of power and skill.

All play, all work, is self-realization; yet to realize one's idea through the work of the hand gives a specific training that can come only through that mode of expression. In the realization of the idea through dramatic action, the whole body becomes the instrument of thought in expression, and a certain freedom is gained that can come through no other mode.

The formal game which is a universal social exercise for children has still another function, based on a psychological difference of attitude. In the game form, rule, and unvarying repetition introduce an element of formality and observance of rule and order which the other modes do not give.

### PLAYTHINGS.

1. Notice the favorite toys of the nursery.
2. Recall the contents of a toy shop.
3. Visit the Field Museum and find the historic toys.
4. See list of references given below for library work.

A rough grouping of the objects found in an ordinary list of toys yields, among other things, the following classes:

1. Toys that are made as miniature reproductions of objects used in adult life, either in the home, in the industries, or in any of the various processes that enter into our common daily living.

2. Toys that depend for charm upon an appeal to sense-perception in some striking way, as rattles, bells, whistles, balls, and other moving toys; likewise brightly colored playthings.

3. Things that can be taken apart and put together, and whose charm depends on this property of divisibility, such as dissected maps and pictures, puzzles, and building blocks.

4. Drawing and painting materials, pictures, slates and blackboards, stencils, and similar devices.

The entire list shows demands coming from children for specific qualities, among which are (1) strong contrasts; (2) objects with which their ideal world may be made real in (*a*) the completed thing, as doll or wagon; (*b*) the raw material, which may be changed to suit the idea, as in the case of paints or blocks.

The chance material which children find and use shows the same feeling for invention; and invention most often of some object around which may cluster observations or ideas of the world of people about them.

## STAGES OF PLAY.

1. Play with objects to get full sensational value, and for sense of action and control.

2. Play with objects in their real uses.

3. Play with objects adapting them to new uses, combining construction or invention, or merely using the whole thing as a symbol or suggestion of some other thing.

Children use materials which lie in their way because they are both accessible and desirable. Desirability suggests a possible educational value for the attractive thing, whatever it may be. It is probable that, when we have found wherein lie the elements of attraction, we may find a substitute, furnishing the same general elements in a more usable form.

*Froebel's gifts.*—It was this plan of study and substitution that led Froebel to adopt his "gifts" and "occupations." They represent an attempt to work out a scheme of play materials that would improve upon chance by furnishing certain conditions.

The first two playthings, known as the first and second gifts, were designed for very young children, who are still hungry for sensations of sight, sound, and motion; who do not yet combine or build, but begin to see likenesses between things, and who establish a play activity upon a resemblance of form or function. The first gift consisted of six soft balls in the prismatic colors;

the second, of a ball, cube, and cylinder of hardwood. These are distinctly nursery playthings, and the majority of four-year old children in our kindergartens are already beyond the stage when these things offer novelty or suggestion for activity. It is the desire to cling to these things in logical order, long after their use is outgrown, that is responsible for much of the futile play in the kindergarten.

The third, fourth, fifth, and sixth gifts form a series of building blocks. In these Froebel's idea finds its most happy embodiment, for the children of kindergarten age, and on into the first and second grades. (1) They offer a material that can be adapted to many uses in construction. (2) As the idea grows and develops, the material responds to the growing needs; the number of parts increases; the variety of form grows. (3) There is no *fixity* about these gifts used day after day; the construction that suited yesterday can be improved upon today. (4) The division of the cubes into parts which are geometric solids lays a good basis for imagery needful in all thinking, in all measuring, and in all making. (5) The division of the cubes into multiples furnishes a continuous subconscious growth in the grasp of number, and a direct training in numerical combination and partition.

Today, as was Froebel's plan, all this formal, mathematical side stands merely as an appeal to sense-perception, and to inference, while the child is using his material to carry out his ideas in play. Number and form are emphasized only when necessary to the carrying out of his play.

## READING IN THE THIRD GRADE.[1]

GUDRUN THORNE-THOMSEN.

THE ideal life of a child in the primary school is one of great activity, activity directed toward educational ends. The child is all the time doing things. He is either producing something for the society in which he lives or investigating new phases of his environment, social or scientific. He is engaged in healthful out-of-door exercise, playing games, and singing; in short, he is following the laws of his being. He is given opportunities for using, and, therefore, for developing, his sense-organs to their fullest extent, for forming judgments and drawing inferences; and the power gained is used in actual doing.

If these premises are agreed upon, it does not seem difficult to assign to reading and to other language study their proper

[1] This reading lesson, in leaflet form, may be obtained in quantity from The University of Chicago Press.

place. Reading is best acquired, as are other branches of knowledge, under the impulse of necessity, in order to reinforce and conduct activity. It thus becomes an organic part of the being, a ready tool. If the children feel the purpose and direction of all their work at the proper time, when there exists a corresponding power to satisfy the appetite, a hunger for reading arises. It would be a violation of the laws of the child's development to force him to read before this hunger has manifested itself; and if the child is normally developed, the psychologists tell us, the power to deal with written or printed symbols will be developed in the seventh or eighth year. Before that time the child may incidentally have gained some acquaintance with these symbols.

To teach reading has been regarded as a most difficult task, and often both teacher and pupils despair. The poor results of several years' constant, dull drill point to the failure of dozens of old and new methods. When reading is taught under the strong impulse of the child to gain vital knowledge, when from the beginning reading is imaging, it is an easy matter to acquire the power to read. A great many children pick it up themselves, and if others were not forced to the book too early, and with no motive but to learn to read, a great many more children would, undoubtedly, teach themselves.

In the third grade there are at present a number of children who have learned to recognize words, but who cannot read. That is, they form no mental images while reading, and of course the books are no enjoyment, no source of inspiration, to them. Their oral reading is stilted, expressionless, purely mechanical. The problem with these children is to overcome their indifference or aversion to reading, to set them right in their attitude toward books. With this in view, the first step is to leave books alone, excepting frequent readings from them by the teacher. Next, when an experience has taken a strong hold of such a group, when there is noticeable a desire for knowledge to enhance this experience, the proper literature should be selected and given to them. The children will read while the teacher stands by to help, so that the thought may come rapidly. The

teacher may ask questions which for answers require the child to think only of the meaning of the printed page (thought analysis).

When these pupils have reached the point where reading is thinking, the only problem is to find enough appropriate literature. There is yet a great lack of reading material having true literary merit adapted to the minds of little children.

Because reading forms so much a part of all the other work of the school, and is so organically bound up with it, no hour is set aside for it on our program. Some days the children may read a great deal and other days perhaps not at all, the necessity and desire being the only guide. For the same reason, some members of the class may read much more than others, each child being treated individually.

READING LESSON FOR THE THIRD GRADE.

## Sven and Kari.

FROM THE NORWEGIAN, BY GUDRUN THORNE-THOMSEN.

SVEN was the son of the parson. He had lived with his grandparents in the city for a long time, and had gone to school there. He was only eleven years old, but had become brimful of learning. No one in the whole parish knew how this would end; he knew so many queer words and had read so many queer books in so many queer languages.

But Old Kari at the manor only shook her head when he began with all these queer words.

"If that's the way you are going to talk when you become a parson, you'll find yourself the only one in the church," said Old Kari.

Well, then it was one day that the minister and his wife were away on a visit to the judge with the two oldest children, and Sven was at home alone with Old Kari.

He was a little sulky because he had not been invited. He didn't like it at all.

It was in the afternoon. Sven didn't quite know how to make time pass, so he went out into the kitchen where Kari was spreading bread and butter for the farm hands. "Kari, shall we play school?" asked Sven. "You must be the pupil and I the teacher." "Oh, yes," said Kari, "but I,

too, want to have my turn at being the teacher." "I know everything," said Sven. And then he began. He walked back and forth on the big floor, just as his teacher used to do at school. Sven looked around to see where he should begin. There was the coffee-pot just ready to be taken from the fire.

SVEN. Now I shall ask you something, Kari, which I'm sure you can't answer. Who was it in this world who first drank coffee?

KARI. We did not learn that in school in my time.

SVEN. The first one who drank coffee in this world was a goat.

KARI. Did the goat drink coffee?

SVEN. Ate coffee, I think, would be more correct.

KARI. So that would be more correct?

SVEN. The coffee beans, you see, we get from a tree. It grows in Arabia and other warm places, and reaches a height of six to twelve meters.

KARI. Well, what about the goats? I might just as well hear the whole thing at once.

SVEN. It was this way. Down there in Arabia the people noticed that the goats were so fond of these berries, and when they had eaten of them they became so wide awake that they ran and jumped about in the middle of the night. And then the people wanted to see if they, too, could stay awake in the night; so they made coffee. But

I'm not sure that this is true. But it is in a book.

KARI. Yes, you don't know a single thing except what is in books.

Sven saw his chance to take a lump of sugar.

SVEN. What do you call this?

KARI. That's stealing.

SVEN. Sugar is a cane.

KARI. Is that lump a cane?

SVEN. At first, don't you understand, at first. Dear me, Kari, I explain everything from the very beginning, don't you see?

KARI. Yes, yes, indeed.

SVEN. Sugar we get from a cane which grows in warm countries. In that cane there is a juice, and from that juice sugar is made.

KARI. Now let me have a chance.

SVEN. Yes, indeed. It'll be hard, though, to find something that I don't know.

KARI. We'll see. What is it you are chewing now?

SVEN. A sandwich.

KARI. How do we get butter?

SVEN. We churn it from cream.

KARI. How do we get cream?

SVEN. We skim the milk.

KARI. How does that happen?

SVEN. How does that happen? You get cream from the milk.

KARI. Yes, of course; but how does it happen?

SVEN. The milk turns into cream.

KARI. How is that? Explain.

SVEN. Oh, you just get cream from the milk.

KARI. I thought so. I suppose this isn't in your books. He can't tell about that which he sees every day. He knows how the moon and the sun look, but he doesn't know that the fat rises to the top of the milk because it is lighter. And that is what becomes cream.

SVEN. Well, yes, that's quite right; the fat rises. The fat is always on top.

KARI. That was butter. What is bread made of?

SVEN. Of flour.

KARI. How do you get flour?

SVEN. From grain.

KARI. How do you get flour from the grain?

SVEN. It is ground at the mill.

KARI. How is it ground?

SVEN. You are so particular. I don't know how to grind.

KARI. One would know that you left home when you were seven years old. Don't you know that the grain is ground between two round stones, and that the upper one goes around and the lower one lies still? And why does the mill-stone go around?

SVEN. Because, because —

KARI. Oh, you don't know. Because the mill-wheel goes around. The river turns the mill-wheel, the mill-wheel turns the stone. Do you think that

everything that comes through between the mill-stones is flour?

SVEN. What else would it be?

KARI. Both bran and flour.

SVEN. What's bran?

KARI. It's the outside of the wheat, and the flour is the inside. When the grain is ground by the mill-stones, the miller must sift it. Then the fine flour goes through the sieve, but the bran is like small shells; it remains. The bran is given to the horses; but some people bake a thin, coarse, hard bread of it.

SVEN. Oh, this is very hard, Kari!

KARI. Yes, isn't it? It's ten minutes' walk down to the mill. Do you think it is hard to plow, too? Why do we plow, Sven?

SVEN. So that the grain may grow.

KARI. Why can't it grow unless we plow?

SVEN. It just can't.

KARI. You don't know at all. It cannot grow in the hard soil; the fine roots cannot get a hold in such hard soil, and the seed must have air. Now you know that. And why do we harrow? Because the plow only tears up big lumps and cuts deep furrows, and the seed needs smooth, soft soil. What else must we do with the ground?

SVEN. It must be rolled?

KARI. Why?

SVEN. Don't ask such things, Kari. Can't you tell it right away?

KARI. The roller pushes the grain down into the ground. If the grain were allowed to lie on top it would dry up, or the birds would come and eat it.

SVEN. You're not so stupid, after all, Kari!

KARI. Oh, I suppose each one will do in his place.

SVEN. Tell me more.

KARI. The rest of it you know well. When the grain is ripe in the autumn, we cut it and dry it and thrash it in the barn.

SVEN. What is thrashing, really, Kari?

KARI. To thrash is to shake the sheaves so that straw and chaff separate from the kernels.

SVEN. Now, Kari, how good a piece of bread and butter would taste!

KARI. You don't really deserve it, who don't know how bread and butter are made.

SVEN. Then neither do you deserve coffee.

KARI. Yes, that's true.

SVEN. We shall have to bear with each other, as the teacher says.

KARI. Yes, that's true.

And then she poured two large cups of coffee and spread two big pieces of the fresh bread, and then Kari and Sven ate and drank. They thought one might be as good as the other, and were the same good old friends.

## THE KINDERGARTEN.

ANNE ELIZABETH ALLEN AND MARY HOWELL.

THE following simple little story should explain its own use. It is one of the transient stories that seem to "make themselves" out of the necessity felt to bring before the children the ordinary household surroundings, inspiring in them a desire to verify, through their own observations at home, the correctness of each object with its use. The children supplied most of the story themselves, when it was once started, and showed more knowledge of this home industry than of the things that come closest to them. At the beginning of the year discouragement is often felt when little real interest is shown in any subject presented, but a little time devoted to the consideration of his own life seems to lay a foundation for any work that may follow for the child in this new life just beginning for him in the kindergarten.

### CORA'S WASH-DAY.

ANNE ELIZABETH ALLEN.

"Everything seems so strange here," said little Cora. "Where am I?" From over in one corner of the great room in which she was standing came a voice which said: "Come here, little girl, and I shall tell you where you are. You are in the land of the washing-day fairies, and I am their queen. You are the child who was sent to do the washing of the little people of my kingdom."

"Yes," said Cora, as she drew closer and closer to the kind-looking fairy, "so I've been told, but I see nothing to wash with." And she gave a frightened look at the pile of dainty fairy garments that lay at her feet.

"In fairyland," said the fairy queen, "that difficulty is easily overcome. Step on that small platform in the center of the floor, and call three times for everything you need, and use your ears. What do you need first?"

"I want three wash-tubs, just as there are in our laundry at home," said Cora, and, standing on the tiny platform, she called: "Tubs! tubs! tubs! where are you, tubs?"

"Here we are, come and find us," came a chorus of little voices.

Cora followed the sound of the voices and soon found the tubs, and the fairies brought them out and put them in place for her.

"What next?" said the queen.

"Water! water! water! where are you, water?" Little Cora was on the platform calling, before the queen had finished asking.

"Here are the water drops; here, come and find us."

So clear were the voices that Cora had no trouble whatever in finding them, and the water was soon pouring into the tubs.

"Soap! soap! soap! where are you, soap?" called Cora.

"Here we are, come and find us," came voices from some shelves in the corner.

"Wash-board! wash-board! wash-board! where are you?"

"Here I am, come and find me."

And now Cora was ready to begin her work. She tried to wring out the clothes with her little hands, when she remembered something she had seen used in her laundry at home that made the clothes so dry and was such fun to turn; and, standing again upon the little platform, she called: "Wringer! wringer! wringer! where are you?"

"Here I am, come and find me," was the reply from a little closet in a corner, from which the fairies brought the wringer.

Then Cora needed a basket, a stove, a boiler, some starch, and clothes-poles. The poles she found in the large back-yard; the clothes line was sticking out of a hole in a bag and needed a great deal of pulling to bring out.

When everything was at last hung upon the line, the Wind, who had been watching his chance, caught up the clothes and, whirling them over and over, threw them down into the dirt.

Poor little Cora had forgotten one thing, and what do you suppose it was?

She gathered up the soiled clothes, rinsed them again, and, mounting the magic platform, called: "Clothes-pins! clothes-pins! clothes-pins! where are you, clothes-pins?"

"Here we are, come and find us. You forgot us, did you?"

said they, as Cora took them from their hiding place; "what a pity!"

"Yes," said Cora, "but I shall never forget you again."

The sun shone warm and bright, and the mischievous wind blew and blew, and soon the clothes were ready to be sprinkled down, ironed, and put away. Cora called for ironing board, irons, iron holder, iron rest, and wax before she was ready to begin, and in the same magical way everything she needed was brought.

When the basket of dainty white garments was brought before the queen, she was greatly pleased, and to show her pleasure she called out all the little fairies of her kingdom, and in the light of the moon they danced, singing praises to the little girl from the work-a-day world who had done so well the work given her to do.

## FIRST GRADE.

(FRANCIS W. PARKER SCHOOL.)

### OUTLINE FOR OCTOBER AND NOVEMBER.

EDITH KINGMAN HITZ.

THE interests and activities of the children entering the first grade are so largely centered in the home and in animal and plant life that the plan for the work of October and November has been outlined with the special thought of meeting these interests and activities.

To encourage each child to do individual work, he should at once engage in some activity in which his interests are centered, for it is only when he is thus interested that he is willing to solve patiently the difficulties which arise before the completion of any piece of constructive work.

*History.*—The history work will begin with the construction of a playhouse which, when completed, will be given to the children of the kindergarten. A large dry-goods box will be used for the outer walls. The children themselves will decide on the best division of rooms, and, after putting in the partitions, will furnish and decorate. As the plan progresses,

the children will compare their own work on this small house with the larger work of the same kind in their homes.

During November the work will broaden into the Thanksgiving season with its festivities and their origin. Stories of the Pilgrims and the first Thanksgiving will be told.

*Literature.*—The literature will be, as a rule, closely related to the main thoughts of the work and the season. The telling and dramatization of stories, poems, and songs: "Golden Rod and Aster," "Clytie," "I'll Tell You How the Leaves Come Down," "The Tree," Björnson; "The Motherless Turkeys."

*Geography.*— The geography work will have for its basis field trips to the Chicago river, the sand dunes, a farm, and the north lakeshore. The grade will be divided into three groups, and each group will make a different collection of specimens, showing the characteristic plant life, the characteristic animal life, and the soil of the district visited. Each collection will be placed in the outdoor laboratory to be used for further study and comparison.

*Nature study.*—(1) The nature study will also be based upon the field trips. The outdoor study will be made from the landscape point of view, with especial regard to problems of soil and moisture. Each child will keep a record, in painting, of the changes which take place in the park, and will take notes on the trees, birds, and other objects of interest seen on these trips. From these notes reports will be made at morning exercises. (2) After the trip to the farm the children will make a model of a farm, showing methods of storing farm products and of transporting them. If possible, a trip to South Water street will be taken. (3) The children of the first grade will take charge of the birds and pets brought to the school. As they feed and care for them, they will compare their habits with those of the animals in Lincoln Park, noting (*a*) food, (*b*) means of protection, (*c*) preparation for winter, (*d*) playfulness of animals. In connection with this phase of the work, parts of the *Jungle Tales* and *Wild Animals I Have Known* will be used. (4) Experimental science: Simple tests of the soils and stones collected in the different regions covered by the field trips.

*Housekeeping.*—The children will make rules which they deem necessary for a harmonious community. Committees will be appointed to attend to the care of materials and wraps. There will also be a committee selected from the first grade to assist in serving the daily lunch. The duties of this last committee will be to help set the table, serve the lunch, wash the dishes, and care for the dish towels and napkins.

*Cooking.*— The children will make the paste for their own use. At certain times they will cook and serve fruit for luncheon.

*Number.*—The number work is not distinctly separated from any of the subjects, but is used whenever it helps to make any of the work more definite. In history it must be used continually in the making of the paper, furniture, etc., for the house; in geography, in making boxes for the collections

in nature study, in the making of notebooks and models; in manual training, in making painting-boards, and in making bean-bags for the gymnasium. Thus, through their interest in the construction and completion of an object requiring mathematical calculation, the children are constantly becoming familiar with the units of measurement — inch, foot, and yard — and with the processes of addition, subtraction, multiplication, partition, and division. They also become acquainted with the use of fractions.

*Reading.*—The different groups will make reading from their notes made on field trips, comparing notes in this way. They will read also from different books when they wish to gain information for use in their work. They also will read simple stories and fables.

*Writing and spelling.*—Each child will construct a simple dictionary, adding words when necessary. He will make records and take notes on field trips. When a child cannot spell, a small folding blackboard will be used for visualizing when on field trips. Constant care will be exercised to have all written work done freely and in good form.

*Language.*—The constant use of written work enables the child to discover the use and learn the name of period, comma, interrogation point, etc. Correct expressions and forms will unconsciously be learned through oral and written work.

*Art.*— Records will be made in drawing and painting of the landscape, of farm animals, and of fruits. A constant use of clay will be necessary in making dishes and in modeling animals.

*Industrial art.*—Each child will make his own dust-cloth and bag for field trips. The children of the first and second grades are to make the bean-bags to be used in the gymnasium.

*Dramatic art.*—The dramatization and impersonating of stories, poems, and songs: "Milkweed Babies," "The Squirrel," "The Motherless Turkeys," and "The Bee."

*Music.*— During October and November the children will learn the songs for the general morning exercises and the Thanksgiving songs; also, "The Morning Sun," "Morning Greeting," "Morning Hymn," "Milkweed Babies," "The Squirrel and the Bee," "The Leaves' Party," "The Brown Birds."

*Manual training.*— Each child will make a painting-board and begin his Christmas gift.

*Physical training.*— See outline on "Physical Training" for primary grade.

## SECOND AND THIRD GRADES.

(FRANCIS W. PARKER SCHOOL.)

### OUTLINE FOR OCTOBER AND NOVEMBER.

JENNIE HALL.

THE purpose of the work in these grades for this year will be primarily to help the children to connect themselves consciously

with certain great social functions around them, and to make them grow into the habit of true social action. A second purpose, which is not entirely distinct from the first, is to bring about a fuller acquaintanceship with the natural, physical world.

In pursuance of these aims, we shall study a few typical industries, to be chosen as the interests and powers of the children become manifest. We shall ourselves work, and visit the shops of prominent workers; we shall study certain natural objects and phenomena that are of interest to the children — for instance, the animals in Lincoln Park, birds, the lake, the weather, the growth of plants by means of a garden.

During October and November we shall study the farm in relation to the harvest and Thanksgiving time. Through visits, pictures, and reading we shall learn how the farm appears now, and what activities are being carried on there. We shall practice such of these industries as the children may choose. We shall probably preserve meats and fruits, and, possibly, convert grains into flour, for a Thanksgiving or Christmas dinner. For the Thanksgiving exercises we shall make and play a little drama founded on this work. It is hoped that the seventh grade can give us the results of their study of the grazing industry, to be used in connection with our preserving of meats, and that the ninth grade can do the same for our milling of grains. Our study of the farm will be the basis of the work in geography.

We shall visit South Water street to see how our foods are distributed. We shall find how produce is brought there, by visiting railroad yards and examining poultry cars, refrigerator cars, box cars; by visiting docks, and making a study of ships and harbor arrangements. We shall make cars and boats in the manual-training shop. Each child will choose which he shall make. This study of transportation will be our work in history.

The literature will be the story of Ulysses, told by the teacher and supplemented with reading lessons, frequent drawing and painting, and with dramatization by the children. Besides this, bits of poetry — for instance, "Mother Goose" rhymes and Stevenson's verses — will be read in connection with the other subjects of study, or for the play interest only.

The children will stock an aquarium and study the habits of the animals. They will watch the weather and the state of plants out of doors, and keep record of certain conditions. Frequent excursions will be made to the Lincoln Park zoo for a study of the animals in order to make paintings of them and to model them in clay. This will constitute the work in science and clay-modeling.

The first thing that needs to be made in the sloyd shop by every child is a clay-modeling board. As soon as this is finished, the children will begin work on their Christmas gifts in wood. Gifts will also be made of cloth or cardboard. At present each child is hemming a dust-cloth to use in keeping his desk and chair clean.

Housekeeping committees have been organized, and the care of the room given into their charge. The children will be encouraged to plan and give little parties occasionally, among themselves or to other grades in the school. At these parties there will be plays, games, songs, stories, and, less often, simple spreads.

The reading and writing will be carried on as needed by the children in the study of the subjects outlined. Not a day will pass in which the children shall not write and read; not as mere drill, but to satisfy a natural demand for information or expression, or for pleasure.

Number will be taught through the making of the things already mentioned. The correlated number work will be reinforced, if necessary, with drill, and, occasionally, with number games.

## FOURTH GRADE.

(FRANCIS W. PARKER SCHOOL.)

### OUTLINE FOR OCTOBER AND NOVEMBER.

ELSA A. MILLER.

THROUGH the activities they pursued in the three preceding grades, and through their home experiences, the children entering the fourth grade are able to begin the study of city life.

They will consider (1) the necessities of city life; (2) how they are supplied; (3) how Chicago compares with other great cities, ancient and modern.

During October and November, while the weather is favorable, the children will make those models, maps, and records that require the greatest number of field trips. Later, during inclement weather, they will do that part of the work which requires the historical basis. Consequently more time will then be spent in reading and picture study.

*History.*—(1) Making a simple map of Chicago as it was before settlement, with typical areas and landmarks of the present day located thereon. The excursions mentioned under "Geography" will provide the necessary data. (2) Making a series of pictures showing the early settlement and the gradual growth of the city. (3) Making models of early vehicles and other means of transportation. (4) Making model of Fort Dearborn. (5) Study of explorations and pioneer life — Marquette, Joliet, the Indians. (6) Comparison of our roads, bridges, and methods of transportation with those of Rome, Athens, Venice, Cairo, Pekin, Paris, and London, by means of stories, reading, pictures, and stereopticon.

*Geography.*— Making relief map of early Chicago, with typical areas indicated, and simple maps showing systems of transportation in Chicago and principal bridges. Study of means of transportation. (1) Excursion: (*a*) through harbor down the river to drainage canal; (*b*) to Dune Park by railway; (*c*) to a farm by wagon; (*d*) to the north shore by elevated and electric roads: principal driveways, waterways, car lines, elevated roads, and railways to be indicated on map. (2) Building of roads under various conditions: (*a*) in sand (Dune Park); (*b*) in loam (farming country); (*c*) in clay (near drainage canal); (*d*) in woods (north shore); (*e*) in hilly sections (north shore). Location of principal viaducts, tunnels, and street and railway bridges. Various kinds of bridges — stationary, rotary, and swinging. Sources of materials used in road- and bridge-building.

*Science.*— Constructing models of roads. Study of materials: (*a*) cedar; (*b*) brick; (*c*) cobble-stone; (*d*) asphalt; (*e*) concrete; their adaptability, and resistance to wear and tear of traffic and to the action of the weather. Excursions to roads built of these materials. Condition of the roads, taking into account dates of construction and amount of traffic, to be compared with results arrived at by experiments, in the laboratory, on the various materials.

Study of homes of hibernating animals, preparatory to making boxes for specimens brought in by children. (The fourth grade is responsible for the care of all specimens collected by the school.) Observation of birds, with special attention to dates of disappearance, dates to be used for comparison with spring record. Condition of plants at Dune Park and north shore and

on the school grounds. Gathering seeds of plants characteristic of typical areas. Recording dates of disappearance of color in all plants characteristic of an area. Recording dates of hibernation of animals. Picture record of landscape, daily record of temperature, wind, and rainfall. Effect of same on soil, water, and air.

*Number.*— Estimating size of city and comparative length of lines of transportation from records of distances covered on excursions. Planning of maps to scale. Planning of boxes for science and geography work. Methods of buying materials for building purposes. Study of a road (one block in length) in process of construction near school grounds. Estimating (1) surface to be covered; (2) amount of material required; (3) cost of material; (4) cost of labor; (5) property-owners' assessments.

Square measure; volume; addition and subtraction of large numbers, and long division, involved.

*Reading.*— Stories of Marquette, Joliet, and the Indians. Stories on early modes of travel and means of transportation in foreign lands, such as "Ali in the Desert."

*Writing.*— Records in science, history, geography, and number work.

*Language.*— Sentence construction; recognition of subject and predicate and simple parts of speech. In written language, use of comma, question mark, quotation marks, and apostrophe.

*Cooking.*— Cooking and serving of fall fruits.

*Housekeeping.*— Organization of committees to look after science specimens, to care for desks and cases, the lunch-room and supplies for same.

*Art.*— Clay-modeling of animals used in transportation. Painting of pictures mentioned under "History." Study of effect of roads on landscape.

*Music.*— Exercises in ear-training, rhythm, breathing, note-reading, and writing. Writing simple original songs. Learning by rote songs relating to work, such as "Riding in the Cars," and songs for morning exercises.

*Manual training.*— Making boxes mentioned under "Science;" plate holders and knife and fork cases; sewing dish-cloths and towels, napkins, holders, and aprons.

*Phyical training.*— Developing and corrective exercises; plays and games.

## FIFTH AND SIXTH GRADES.

HARRIET T. B. ATWOOD, JENNIE CURTIS, WILLARD S. BASS.

THE outline for this month comprises statements from the above teachers as to how the subjects of reading, writing, and arithmetic are taught in their grades, with illustrations taken from the October work of fifth and sixth grades.

I. *Arithmetic.*—Throughout the school the aim is that arithmetic shall be closely correlated with the other subjects of study; *i. e.*, whenever a teacher

finds that by the use of mathematics his pupils' imaging can be strengthened and made more vivid, whether the lesson be nature study, geography, history, art, or manual training, it is his privilege to change it to one of mathematics. By following such a course it is believed that mathematics may greatly enrich the other subjects. Moreover, it has been proven that any mathematical process, however difficult, can be more quickly taught when the actual need for using it is felt by the children, than by years of isolated drill. Therefore, by close correlation, mathematics itself will become easier and of greater value to the student.

If, however, the mathematical processes have not been properly taught, and the time comes when greater skill in combination of numbers is required for economical work, it is believed that drill is necessary and should be given. Upon these principles the following plan of work for the fifth and sixth grades is based:

When the children enter the fifth grade, they have already worked in mathematics for some four years. If they have really *used* mathematics during those years, it is expected that they will now be able to use numbers thoughtfully, and that they have acquired skill in the practice of simple operations in addition, subtraction, multiplication, division, and partition. If this condition has been reached, the line of procedure is easy; for fractions, decimals, and percentage bring with them no new elements, but simply a different terminology. If, however, the mathematical sense is found undeveloped, the thoughtful use of the simple operations must first be attained.

The time has not been sufficient as yet to learn the true state of the present fifth grade, but the work was begun as follows:

1. For the work in history it is necessary that each child construct a hand-loom as soon as possible. The children were shown a model of the loom to be made, and asked to calculate the amount of lumber necessary for the class of twelve. To do this the children first added together the lengths of the nine strips needed for each loom; 1, 3 feet; 2, 3 feet; 3, 2 feet; 4, 2 feet; 5, 2 feet 4 inches; 6, 6 inches; 7, 6 inches; 8, 8 inches; 9, 8 inches = 14 feet 8 inches.

They were required, for home study, to look up the subject of board measure, either in an arithmetic or by visiting a lumber yard, and reporting on the way lumber is sold. After doing this, they estimated that 3 boards 15 feet long, 12 inches wide, and 1 inch thick, when dressed, would be sufficient. The order was then sent in through the manual-training department. When the cost of the lumber is ascertained, each child's share will be calculated.

Next the children were asked for sketches and working drawings of the loom. (A working drawing made to a definite scale is required before work in the shop can proceed.) The working drawing was made one-sixth the actual size of the loom. In making the drawing the children found it necessary to find $\frac{1}{6}$ of 36 inches, $\frac{1}{6}$ of 3 inches, $\frac{1}{6}$ of 1 inch, $\frac{1}{6}$ of 8 inches, $\frac{1}{6}$ of 6 inches, and $\frac{1}{6}$ of 28 inches. Since each inch on their rulers was divided into

eighths of an inch, it was necessary to determine the value of $\frac{1}{8}$ of 1 inch in eights of an inch.

2. In domestic science the children are to preserve fruits in various ways for the Thanksgiving festival.

First they tried the drying process. Each child placed part of his fruit in the sun and part in the drying oven in order to find out the best way for drying the fruit that is to be prepared for Thanksgiving. Each portion was carefully weighed when fresh, and again after a week of drying, and the loss of weight under the two conditions compared.

In the weighing the children became acquainted with the metric system of weights and were shown how to write numbers decimally. They were also asked to learn the metric table of weights at this time. In finding the loss of weight, subtraction of decimals was necessary.

3. In clay-modeling the children are making pottery for the lunch-room.

In order to make symmetrical designs on the plates and saucers, it was found necessary to divide the circles, drawn to represent the dish, into equal parts, as thirds, fourths, or eighths. In mathematics, therefore, the children are at present engaged in finding out how to bisect and trisect arcs of circles.— *H. B. A.*

II. *Writing, spelling, and English.*—Writing, spelling, and English are so closely interrelated that it is impossible to deal with them separately. Every written lesson should be a "writing lesson." If, in the grades preceding the sixth grade, the children have been well trained with regard to legibility, speed, and position at the desk, the teacher's only problem is to preserve their good habits. However, this condition is seldom found, and for this reason the children should be carefully directed in the technique of writing. With us there is no formal drill in writing. Writing is used by the children in reproducing a piece of literature or story they have read, in relating their experiences in and out of school, in describing the materials with which they work, in giving the results of their study; in short, it is used as a means of expressing thought.

In doing their written work the children are encouraged to use the dictionary in order not to misspell; but when a misspelled word is found, the correct form is written and the child asked to rewrite his page. No paper containing a misspelled word is placed on file. Each child has a blank book in which he keeps a list of the words he misspells. The children have asked for a spelling match in which to spell the words in the dictionaries compiled by themselves. This request will be granted at the end of the month by giving them both a written and an oral test.

In all written work, capitalization, punctuation, and paragraphing are carefully observed. When an error is found, the page is rewritten, as in the case of a misspelled word. For instance, a child begins a sentence with a small letter. The rule for capitalization is asked for, given by the children, and by each child written into a book he has for the purpose. Again, the

wrong form of the verb is found. None of the pupils can give the rule, and they are asked to look it up at home and bring five examples of the correct form. The best papers are read before the class, and the thought and style discussed.

The following example illustrates our manner of attaining in writing, as a mode of expression, proficiency in spelling and in all the forms of language: Our grade spent a day at the lakeshore north of Chicago. We talked of the wearing and building by wind, waves, and streams, and found many examples of each. In school the next day each child told, in writing, how cliffs, ravines, deep indentations in the shore, sand beds, gravel beds, sand spits, bars, etc., are formed. These compositions were worked on by the children until they were satisfactory in writing, spelling, and English.—*J. E. C.*

III. *Reading, oral reading.*—By normal children the power to read is usually acquired between the ages of six and eight; the average age of children entering a fifth grade being about ten years. More than two years' experience in reading usually precedes this grade. If this reading has been strong imaging from the start, the problem of the child's reading has been forever solved, and all that remains is the enlargement of his vocabulary. If, on the other hand, unnatural reading has been allowed, *i. e.*, if the child has simply recognized and pronounced words without gaining the thought, true reading, *i. e.*, imaging by means of the printed page, must first be brought about.

In the fifth grade in the School of Education children in all stages between the extremes mentioned have been found. The line of procedure will be as follows:

1. Care will be taken to select an abundance of reading matter adapted to the children, *i. e.*, reading matter that will arouse images closely related to those aroused by their work in the central subjects of study, by their plays and sports, and by their home environment.

2. Library periods have been arranged during school hours for silent reading, or study, and the children will be encouraged to take the books home.

3. Ample opportunity will be given those children who do weak imaging while reading, to express what they read by drawing, painting, telling, or acting. For example, such children may be asked to tell in their own language what they read, or to step to the board and sketch the picture they have gained by the reading.

4. Periods on the program are given to oral reading, or, more broadly speaking, to oral expression. During such periods selection of literary and dramatic merit will be read aloud by the children, some selections will be dramatized, and certain poems will be studied and memorized.

5. Only those children who image well will be asked to read orally, although all will in some way express what they read. (See 3, above.)

6. Errors in speech will be noted and individual corrective work will be

assigned. If it is found necessary, daily drill will be given in articulation and in the correct utterance of vowel sounds.

An article upon oral and dramatic art in these grades will appear in a later issue of the COURSE OF STUDY.—*H. B. A.*

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*Physical training* (for October and November. Omitted from October outline for fifth and sixth grades).—Exercises to improve posture, bearing, and carriage; fundamental free exercises in and from place, with special reference to development of accurate co-ordinate action. Elementary apparatus work, involving various forms of support and changes of support; adaptations of forms of free gymnastics in hang-standing and lying position. Various forms of springing exercises, skipping, jumping. Games: Indoor—ball practice with ten-inch hand-balls; "catch-ball"—position, distance, and direction definite; varying. Outdoor—various forms of relay-racing, team and class contests, twenty-five to fifty yards. Organization of basket-ball teams and dancing classes.

## SEVENTH GRADE.

NOTT WILLIAM FLINT.

ALTHOUGH at the time these outlines go to the printer there has been only one full week of school work, nevertheless the plan of giving, instead of outlines of the work to come, reports on work past—a plan announced in October to begin with the December number—will, in the case of the seventh grade, begin now. Under the circumstances, however, the reports are necessarily meager.

A general outline of the work for the year in this grade will be found in the October number.

*History.*—In history the class began by attempting to image primitive conditions. The question, What would you do to leave a record of yourself if abandoned on a desert island? soon brought out the idea of writing on smooth stones and of stone monuments. No child thought of inscribing soft clay tablets and then baking them in the sun. That idea came only when one boy saw a picture of an Assyrian clay brick written on all four sides. The suggestion that the class might make such books for themselves brought out enthusiastic responses as to how the work should be done. (Several members had had experience in the clay-room.) Pictures of such writings in the *Encyclopædia Britannica*, in Ragozin's *Chaldea*, and in several books

kept in the library of the Field Columbian Museum were examined by the class. A trip to the museum showed, besides the books, fac-similes of writings and pictures on stone made by the Indians of Central and South America.

At this point each child drew to scale a plan of the clay book he wished to make. The designs were all in simple tablet form, except two, which the designers afterward simplified in the clay-room, because of the exigencies of the material worked with and the difficulties in the way of baking.

The matter of inscriptions was next taken up. What would they write upon these tablets, and how should they write it? Unanimously the class decided to write something concerning the Babylonians, Chaldeans, or Assyrians, as the most fitting subject. The hieroglyphics of the Egyptians and the picture-writing of the Indians first took their fancy: they would inscribe their tablets with cryptic rebuses. But when confronted with the necessity of making themselves as intelligible as possible, all but one boy gave up the idea of picture-writing and decided to print their inscriptions.

The inscriptions themselves were first written on theme paper, read aloud to the whole class, criticised for correctness and effectiveness, and returned to the author for correction.

Since the class had decided to write about the Babylonians, they found it necessary to get information. They got what they could from the encyclopædias, Ragozin, and Rawlinson's *Ancient Egypt;* also they were encouraged to find other books for themselves. Some Babylonian stories were told in the class-room; the story of Belshazzar made a deep impression upon the children, and at least three of them wrote it up to put upon their tablets.

*Geography.*— The work was begun by the teacher's asking the children where each one had spent his summer. The attention of each was directed to the physiographic features of his particular locality, and he was asked to explain them. A great many questions were thus brought up and left, for the present, unanswered. These questions and the answers to them will constitute a basis of reference and comparison for all the geography work of the quarter, at least. Then a field trip to Lakeside brought the class face to face with physiographic problems: shore lines, cliffs, glaciated stones, a ravine — all these they found difficulty in adequately accounting for. Questions thus arising were likewise put by for study and reference.

The lack of an adequate map hindered the study of the geography of Babylon, but by the time this outline is printed the class will have considered the Babylonian people from the point of view of their physical environment.

*Nature study.*— The study of the distribution of seeds was the first topic engaging the attention of the class. The question, How do seeds get themselves planted? started the subject. Some of the children knew a good deal about seeds, but most of them had not given a thought to the matter. A search for specimens was instituted through the neighboring vacant lots, and, when these were brought in, each finder told the class how his particular seed

got itself distributed. This required a somewhat close examination of structure, and in many cases led to search for a description of the plant in books. A classification of methods of distribution was made by the class, and as soon as the materials can be obtained the specimens will be mounted according to this classification on large sheets of cardboard.

So far, on account of lack of materials, there has been no painting or drawing.

*English.*— The work in English has been done entirely in connection with the other studies. Every other day the children have been asked to write at least a paragraph on some part of their work: How a (certain) seed gets itself planted; The most interesting thing on my field-trip; Inscriptions for the clay tablets—were some of the matters thus written about. On each occasion a few of these writings were read in class by the teacher, and criticised by the other members. The class is very deficient in spelling. Each member carries, therefore, a small pocket notebook, in which he writes down correctly every word that he has misspelled.

*Number work.*— So far the work in number has not been correlated. The necessity for finding out just where the children stand in arithmetic has been the dominant factor. Questions and examples in fractions have brought out the fact that drill and a thorough understanding of fundamental principles are needed even in this field. One thing proposed is that the teacher make tables of various combinations, each table illustrating several processes of arithmetic, and that the class spend at least five minutes of each number period in this drill in mental arithmetic.

## EIGHTH GRADE.

KATHARINE M. STILWELL AND ELIZABETH ADAMS.

THE class will continue the geography and history work indicated in October according to the following outline:

I. A brief review of the causes which led to the westward movements during the fifteenth century. (Fiske.)

II. The occupation of the Atlantic coast. (1) Simple geological history. (*a*) The fall line. How both the savage and the civilized man recognized its geological conditions in the sites of his villages and cities. (*b*) The Piedmont region. Advantages of the limestone belt. How the settlers moved up the southern river valleys. (*c*) New England settlements; their extension up the Connecticut and the Housatonic. New York settlements, up the Mohawk.

III. Life of these colonists.

IV. Cause of expansion. (1) Restlessness of the people. (2) Exploitation of the soil due to slave labor and extensive farming. (3) Limestone formations.

V. Direction of movement. (1) Barriers. (*a*) The Blue Ridge. (*b*) The Alleghany plateau. Effect on civilization as shown in the present life of mountain peoples. (2) Natural routes — river valleys. (*a*) Connecticut, Hudson, Delaware. (*b*) Mohawk. (*c*) Susquehanna. (*d*) Potomac. Special study of these rivers as the highways to the West. The buffalo as the path-finder; the traveler; the Indian; the hunter; the ranchman, and the farmer.

VI. Kentucky and Tennessee. The geology of this region, its influence on vegetation and, through that, on the settlement. Note specially: the Shenandoah valley; the blue-grass region of Kentucky; the Nashville basin of Tennessee. Effect of this environment upon the development of the settler.

Joaquin Miller's "Sail On" and "The Centennial Meditation of Columbia," by Sidney Lanier, will be studied as part of this topic. Sparks's *Expansion of the American People* will be used as a text in history. In geography the class will use Mills's *International Geography* and Powell's *Physiographic Regions of the United States.*

In nature study the class will continue the work begun in October, studying the animal life of this vicinity, noting what animals have migrated, hibernated, disappeared, or changed covering. The subject will be studied in its relation to our climatic conditions.

The snakes, toads, frogs, and turtles already brought into the school will furnish data on hibernation. The out-of-door study will be further supplemented by visits to the Field Columbian Museum, and the animals seen there will be studied and classified according to climate and zone. The use man has made of animal coverings — hair, fur, feathers, and wool — and the manner in which these coverings are prepared, will be investigated.

The knowledge of meteorology needed for this work will be gained from Bartholomew's *Physical Atlas* and Jordan and Kellogg's *Animal Life.* On the uses of animal coverings, the pupils will read from the following list: *Young Folks' Cyclopædia;* Chase and Clow, *Stories of Industry;* Simmonds, *Animal Products;* Lankester, *Uses of Animals;* "An Experiment in Silk Culture," *Popular Science Monthly,* 1886; Nelson, *American Silk Worm;* Brooker, *Manufacture of Wool in America.*

The grade will draw to scale the side walls of the class-room, representing, in their proper places, forms, and sizes, all objects, such as windows, doors, blackboards bookcases, lavatories, and pictures, whether standing or hanging against the walls. These drawings will be used as bases for the plans, specifications, and estimates of cost of the decorations and paintings to be put upon

the walls. The measurements are to be made without the use of step-ladders; inaccessible distances to be measured as in surveying, elementary geometrical replacing the customary trigonometrical methods.

The appliances to be used are such as are figured and described in the COURSE OF STUDY, Vol. I, No. 7, or in Professor George W. Myers's pamphlet, *Elementary Experiments in Observational Astronomy*, which is a revised reprint of the matter as it appeared in the COURSE OF STUDY.

The work in arithmetic and algebra begun in October will be continued.

*Physical training* (Mr. Kroh).—Free exercises: Standing, marching, and running in and from place; emphasis of volitional control through fundamental exercises in difficult positions; movement combinations demanding quick and accurate co-ordinations; specific dumb-bell and wand exercises; extension exercises.

Apparatus gymnastics: Elementary exercises in "hang" and "stem" support positions, with various hand grasps, arms extended and bent; leg-elevations, thigh flexions, and extensions in position; "circling" under and above apparatus. Development of vaulting exercises: adaptation of jumping exercises, involving various forms of starting; high and broad jumping.

Games: Indoor practice with medicine ball—thrusting, putting, and hurling over definite distances. "Catch ball," with basket ball—marching and running in definite directions; also without prescribed order. Outdoor practice of starts, sprints, dashes; relay races, fifty yards and over; football practice.

Organization of basket-ball teams and classes in dancing calisthenics.

*French* (Lorley A. Ashleman).—As work in French for the coming month, the eighth grade will dramatize the characteristic events in the life of Jeanne d'Arc. The study of the life of this heroic girl, who has been called the ideal type of the American woman, will be particularly profitable because of the insight it will give into the condition of France and England at the beginning of the fifteenth century. An effort will be made to represent in appliqué the banner carried by Jeanne d'Arc to battle. For this purpose the art galleries in the city containing paintings pertaining to her life will be visited.

JEANNE D'ARC.

I.

(MISE EN SCÈNE.)

(Jeanne d'Arc, seule dans le jardin de son père à Domrémy, file sa quenouille. On entend sonner l'Angelus. Elle laisse tomber sa quenouille.)

*Jeanne.* Que voulez-vous, mon Dieu, de votre pauvre servante? (Elle

semble écouter une voix qui lui parle, puis elle fond en larmes.) Les sons de la cloche me rappellent la voix de Saint Michel que j'ai entendue hier: Jeanne, sois bonne et pieuse: Jeanne, va au secours du roi de France, et tu lui rendras son royaume. Je lui ai répondu: Messire, je ne suis qu'une pauvre fille, je ne saurais monter à cheval ni conduire des hommes d'armes.

[Pierre, son frère, entre dans le jardin. Il contemple sa sœur avec émotion, s'avance, lui prend la main et la fait asseoir sur un banc.]

*Pierre.* Jeanne, ma sœur, pourquoi pleures-tu tant ces derniers jours?

*Jeanne.* Je songe, mon frère, à la France, à notre pauvre Sire. Dès que les saints et les anges me quittent, je n'ai plus de courage.

*Pierre.* Que vas-tu devenir, Jeanne? Que tu es changée depuis quatre ans! Je me souviens du premier jour où tu entendis pour la première fois les voix célestes. Tu n'avais que douze ans et tu eus grand' peur.

*Jeanne.* J'aurais bien voulu que les anges m'eussent emportée!

*Pierre.* Que te disent les voix célestes?

*Jeanne.* St. Michel me dit d'aller au secours du roi de France et de lui rendre son royaume. (Pierre regarde sa sœur, comme s'il la croyait malade, secoue tristement la tête et lui répond simplement.)

*Pierre.* Alors . . . .

*Jeanne.* Je lui ai répondu toute tremblante: Messire, je ne suis qu'une pauvre fille: je ne saurais ni chevaucher, ni conduire des hommes d'armes. Faut-il, O Pierre, que je délaisse notre chère mère, cette douce maison, moi, qu'un seul mot déconcerte? Faut-il que j'aille parmi les hommes? Me faut-il quitter ce petit jardin sous l'ombre de l'église, où je n'entends que les cloches et où les oiseaux mangent de mes mains?

*Pierre.* Jeanne, tu ne peux partir. Mon père a dit que si tu t'en allais avec les gens de guerre, il te noierait plutôt de ses propres mains.

*Jeanne* (toute désespérée). Ah! quel combat! de part et d'autre. (On entend parler.) Il faut donc que je désobéisse?

*Pierre.* Essuie tes larmes, Jeanne; voici le père qui vient; je vais à sa rencontre.

*Jeanne* (seule, comme dans un rêve). Aujourd'hui tu me dis, Va à Vaucouleurs chez le sire de Baudricourt. Que vais-je devenir?

(Son père, Jacques d'Arc, ses deux frères et ses deux sœurs approchent gaiement. Les deux sœurs et le frère continuent l'allée qui mène à la maison, tandis que le père et Pierre s'approchent du banc.)

*Le père* (Jacques d'Arc). Jeanne, que fais-tu ici au jardin à l'heure du déjeûner?

(Pierre prend la main de Jeanne et tous les trois se dirigent vers la maison.)

*Jacques d'Arc.* La charrue s'est cassée. Ce qui explique notre retard. Tu n'as donc pas averti la mère, Pierre? Elle sera inquiète et s'imaginera que les soldats anglais moissonnent de nouveau nos champs, que notre village sera encore une fois saccagé et notre maison dévastée.

## II.

### VAUCOULEURS.

(Chez le capitaine Baudricourt. Jeanne d'Arc, vêtue de ses gros habits rouges de paysanne et accompagnée de son oncle André Laxart, s'incline devant le sire de Baudricourt. Dans une grande salle du château, celui-ci le casque en tête, revêtu de sa cotte d'armes, une immense épée à son côté et la lance à la main, en costume de guerre écoute.)

*Jeanne.* Sire, je viens vers vous de la part de mon Seigneur pour que vous mandiez au dauphin de se bien maintenir et de n'assigner point de batailles à ses ennemis, parce que mon Seigneur lui donnera secours dans la mi-carême. Mon Seigneur veut que le dauphin devienne roi. En dépit de ses ennemis il sera roi, et je le mènerai sacrer.

*Le capitaine Baudricourt* (un instant stupéfait, revient de son étonnement). Il y a là quelque diablerie. Avant de vous répondre, jeune fille, je vais consulter le curé, qui viendra vous parler. (Le capitaine sort, et tandis que son oncle regarde par la fenêtre, Jeanne prie et n'aperçoit pas que le curé entre. Celui-ce déploie son étole et adjure Jeanne.)

*Le curé.* Si vous êtes envoyé du mauvais esprit, éloignez-vous, ma fille!

*Jeanne.* Je viens de la part de Dieu. Saint Michel accompagné de Sainte Cathérine et de Saint Marguerite m'ont dit d'aller trouver le capitaine Baudricourt et qu'il me conduirait près du dauphin.

*Le curé.* Ah! Ah! Je n'ai plus de doute, cette fille est folle! (Baudricourt, qui entr'ouvrait la porte à cette exclamation du curé, s'avance brusquement.)

*Baudricourt.* Je me refuse à votre demande; retournez chez votre père!

*Jeanne.* Sire, il faut que je sois devers le roi, dusse-je pour m'y rendre user mes jambes jusqu'aux genoux; car personne au monde, ni roi, ni duc, ni fille du roi d'Écosse, ne peuvent reprendre le royaume de France; et il n'y a pour lui de secours que moi-même, quoique j'aimasse mieux à rester à filer près de ma pauvre mère; car ce n'est pas là mon ouvrage; mais il faut que j'aille et que je le fasse parce que mon Seigneur le veut.

*Baudricourt.* Et quel est votre Seigneur?

*Jeanne.* C'est Dieu.

(A peine a-t-elle prononcé ces quelques mots que des voix se font entendre dans la cour.) Vive la sainte fille! Vive l'envoyée du ciel!

*Baudricourt* se met à la fenêtre.

*Les voix.* Vive le sire de Baudricourt! Sire, menez à Chinon la vierge de Lorraine.

*Baudricourt* (se retourne vers Jeanne). Je vais demander l'autorisation du roi.

III.

LA COUR DE CHARLES VII À CHINON.

(Le roi à la lueur des torches; seigneurs et chevaliers, l'archevêque de Rheims, réunis autour de roi, manifestent une vive curiosité.)

*1er seigneur.* Je m'impatient de voir la sorcière!

*2e seigneur* (avec raillerie). Appelle la donc l'inspirée!

*Un chevalier.* La voici!

(Jeanne se présente humblement comme une petite bergerette. Elle démêle au premier regard le roi qui s'était mêlé exprès à la foule des seigneurs. Charles la voit s'avancer et lui dit.)

*Charles.* Vous vous trompez, ma fille. Je ne suis pas le roi.

*Jeanne* (embrasse ses genoux). Gentil dauphin, j'ai nom Jehanne la Pucelle. Le roi des cieux vous mande par moi que vous serez sacré et couronné en la ville de Rheims, et vous serez lieutenant du roi des cieux qui est le roi de France.

(Charles la prend à part et lui parle à voix basse. Ils changent tous les deux de visage. Les courtisans ricanent. On entend Jeanne prononcer tout bas ces mots.) Je te dis de la part de Messire que tu es vrai héritier de France et fils du roi.

*Charles.* Mais comment puis-je reconnaître que tu n'es pas inspirée du diable? Je vais assembler quatre ou cinq docteurs pour t'examiner.

(Sur un signe du roi l'archevêque de Rheims s'avance. Le roi lui dit quelque chose à l'oreille, *et il* choisit plusieurs dominicains pour examiner le cas de Jeanne.)

*Charles.* Asseois-toi sur ce banc; ces dominicains vont t'interroger.

*1er dominicain.* Jeanne, tu dis que Dieu veut délivrer le peuple de France. Si telle est sa volonté, il n'a pas besoin des gens d'armes.

*Jeanne* (sans se troubler). Ah, mon Dieu, les gens d'armes batailleront, et Dieu donnera la victoire.

*2e dominicain* (Seguin). Dans quelle langue parlait donc cette prétendue voix céleste?

*Jeanne* (avec vivacité). Dans une langue meilleure que la vôtre. (Le docteur parlait le dialecte limousin.)

*3e dominicain* (en colère). Crois-tu en Dieu? Dieu ne veut pas que l'on ajoute foi en tes paroles. A moins que tu ne montres un signe . . . .

*Jeanne.* Je ne suis point venue pour faire des signes ou miracles. Mon signe sera de faire lever le siège d'Orléans. Qu'on me donne des hommes d'armes, peu ou beaucoup, j'irai . . . . (En ce moment toute l'assistance est pour elle.)

*4e dominicain.* Par toutes les écritures sacrées, on ne doit pas vous croire.

*Jeanne.* Écoutez: Il y en a plus au livre de Dieu que dans les vôtres. Je ne sais ni *A* ni *B*, mais je viens de la part de Dieu pour faire lever le siège d'Orléans et sacrer le dauphin à Rheims. Auparavant il faut pourtant

que j'écrive aux Anglais et que je les somme de partir. Dieu le veut ainsi. Avez-vous du papier et de l'encre? Ecrivez, je vais vous dicter.

(Les juges se mettent docilement à écrire.)

*Jeanne.* A vous, Suffolk, Classidas et la Poule: Je vous somme de par de Roi des cieux que vous vous en allez en Angleterre.

*Une voix de l'assistance.* Cette fille est envoyée de Dieu.

*Charles.* Qu'on équipe la Pucelle. On lui donnera pour écuyer un brave chevalier, Jean Daulan, le plus honnête homme qu'il y ait parmi mes gens. Donnez lui un noble page, deux herauts d'armes, deux valets, et pour confesseur qu'elle ait Jean Parquerel.

## IV.

(Jeanne, après une seconde entrée triomphale à Orléans, entourée de La Hire, Dunois, Xaintrailles et Richemont contemple les Anglais qui battent en retraite. Dunois s'approche d'elle et regarde aussi par la fenêtre.)

*Dunois.* Talbot et Suffolk dirigent cette retraite en bon ordre et fièrement. Vous avez bien fait de défendre qu'on les poursuivit puisqu'ils se retirent d'eux-même.

*La Hire.* Quelle victoire! dans la dernière bastille, il y avait 500 hommes. Tout fut pané au fil de l'épée.

*Jeanne.* Ah! ne parlez pas de sang. J'aime bien mon épée, mais j'aime quatre fois mieux mon étendard. Que j'ai pitié de leur âme!

*Richemont.* Vous êtes l'épée et l'étendard de la France.

*Dunois.* Nous n'avons qu'à aller hardiment à Rheims mettre la main sur la couronne de France.

*Richemont.* Cela semble téméraire.

*Xaintrailles.* Il faut dévancer les Anglais pourtant, puisqu'ils ont fait l'insigne faute de ne pas faire sacrer leur jeune Henri VI.

*Dunois.* Le premier sacré doit rester roi.

*La Hire.* Quelle grand chose pour Charles VII de faire sa royale chevaucher à travers la France anglaise, de montrer que partout en France, le roi est chez lui.

*Jeanne.* Je suis de votre avis.

*Dunois.* Ah! ah! cette folie héroique est peut-être une sagesse. Nous ne donnerons pas aux anglais le temps de reprendre courage.

*Xaintrailles.* Allez dire au roi, Jeanne, de se porter en avant et de se faire couronner à Rheims.

*Jeanne.* Il y trouvera reu de résistance, tel étant le bon plaisir de Dieu. (Elle prend son étendard.)

*Jeanne.* Avant que les Anglais s'éloignent et perdent de vue la ville, je veux dresser un autel dans la plaine et, en présence de l'ennemi, rendre grâce à Dieu. N'oublions pas que c'est aujourd'hui dimanche.

(Elle sort suivie de ses généraux.)

V.

LE JUGEMENT.

(Une salle de justice à Rouen (ecclésiastique). Jeanne est amenée devant ses juges. L'évêque de Beauvais lui parle d'une voix mielleuse.)

*L'évêque.* Je vous prie de dire la vérité sur ce qu'on vous demandera pour abréger votre procès et décharger votre conscience sans chercher de subterfuge.

*Jeanne.* Je ne sais sur quoi vous me voulez interroger. Vous pourriez bien me demander telle chose que je ne vous dirais point.

*Un juge.* Consentez-vous à jurer de dire le vrai?

*Jeanne.* Je jure de dire le vrai sur tout ce qui ne touche point mes visions. Pour ce dernier point vous me couperiez plutôt la tête.

*Un autre juge.* Jurez-vous de répondre sur ce qui toucherait la foi?

*Jeanne.* Je le jure.

*1er juge.* Quel âge avez-vous?

*Jeanne.* Environ dix-neuf ans.

*2e juge.* Où êtes-vous née et comment vous appelez-vous?

*Jeanne.* Au lieu, où je suis née, on m'appelle Jeannette.

*3e juge.* Vous avez essayé plusieurs fois d'échapper. C'est pourquoi on a dû vous mettre les fers aux jambes, ce dont vous vous plaignez.

*Jeanne.* C'est vrai, j'ai voulu m'échapper de prison, comme c'est le droit du tout prisonnier.

*2e juge.* Je vous ordonne de dire le pater et l'Avé. (Dans l'idée superstitieuse que si elle était vouée au diable, elle ne pourrait dire ses prières.)

*Jeanne.* Je les dirai volontiers, si Monseigneur de Beauvais veut m'ouïr en confession.

*L'évêque.* Je refuse.

*1er juge.* Avez-vous entendu des voix?

*Jeanne* (avec vivacité). Elles m'ont éveillée. J'ai joint les mains et je les ai priées de me donner conseil.

*3e juge.* Que vous ont-elles dit?

*Jeanne.* Demande à notre Seigneur . . . .

*2e juge.* Et qu'ont-elles dit encore?

*Jeanne.* Que je vous réponde hardiment (tout émue) . . . . Je ne puis tout dire . . . . J'ai plutôt peur de dire choses qui leur déplaisent. Je vous prie de ne pas m'interroger.

*L'évêque* (avec instance). On déplaît donc à Dieu en disant des choses vraies.

*Jeanne.* Mes voix m'ont dit certaines choses non pour vous, mais pour moi. Je viens de par Dieu, renvoyez moi à Dieu, dont je suis venue.

*L'évêque.* Pourquoi votre étendard fût-il porté à l'église de Rheims, au sacre, plutôt que ceux des autres capitaines?

*Jeanne.* Il avait été à la peine, c'était bien raison qu'il fût à l'honneur.

*1er juge.* Quelle était la pensée des gens qui vous baisaient les pieds, les mains et les vêtements?

*Jeanne.* Les pauvres gens venaient à moi parce que je ne leur faisais point de peine et je les défendais selon mon pouvoir.

*L'évêque.* Les voix vous ont-elles commandé cette sortie de Compiègne où vous avez été prise?

*Jeanne.* Les saints m'avaient dit que je serais prise avant la Saint Jean, que je ne devais pas m'étonner et que Dieu m'aiderait, puisqu'il a plu ainsi à Dieu, c'est pour le mieux que j'ai été prise.

*3e juge.* Jeanne, savez-vous par révélation si vous échapperez?

*Jeanne.* Cela ne touche point votre procès.

*4e juge.* Vos voix ne vous ont donc jamais rien dit en général?

*Jeanne.* Eh bien! oui les saints me disent que je serai délivrée à grande victoire; elles me disent de ne pas me soucier de mon martyre et que j'en viendrai enfin au royaume du Paradis.

*L'évêque.* Ne voulez-vous donc pas vous soumettre à l'église militante?

*Jeanne.* Je suis venue au roi de France de par Dieu, de par la Vierge Marie, les saints et l'église victorieuse de là haut; à cette église, je me soumets, moi, mes œuvres, ce que j'ai fait ou à faire.

*L'évêque.* Et à l'église militante?

*Jeanne.* Je ne répondrai maintenant rien autre chose et (tout bas à elle-même) c'est elle qui me condamnera à mort.

*German* (Eduard Prokosch).—Grimm's fairy tale "Sneewittchen," begun in October, will be finished, and later dramatized for the Christmas exercises. Other fairy tales and stories will be read in connection with history. Gymnastic exercises conducted in German. German correlated with nature study. The latter will be done not only during the German recitation periods, by means of pictures, drawings, etc., but also during the nature-study periods, in co-operation with the teacher of that subject. A German harvest song will be memorized to be sung at the Thanksgiving exercises.

## THE MORNING EXERCISE.

BERTHA PAYNE.

| | | LEADER. |
|---|---|---|
| November 1. | Reaping | Miss Ashleman |
| 5. | The Pan-American Exposition | Miss Baber |
| 6. | Fruits | Mrs. Norton |
| 7. | More Beautiful Books | Miss Warren |
| 8. | Nature Study | Mr. Jackman |
| 12. | Current Events | Miss Rice |
| 13. | Robert Louis Stevenson | Miss Crawford |

| | | |
|---|---|---|
| 14. | Seeds | Miss Howell |
| 15. | Pottery | Miss Hollister |
| 19. | The Dignity of the Body | Mr. Kroh |
| 20. | Trees | Miss Butler |
| 21. | Music | Mrs. Bradley |
| 22. | Current Events | Miss Rice |
| 26. | Louise M. Alcott | Miss Curtis |
| 27. | Thanksgiving | Miss Van Hoesen |

HISTORICAL EVENTS AND BIRTHDAYS.

| | | |
|---|---|---|
| November 2. | Kingdom of Italy Established by Garibaldi | 1860 |
| 3. | William Cullen Bryant | 1794 |
| 5. | Guy Fawkes Day. | |
| 8. | Mason and Slidell Taken from the Trent | 1861 |
| 8. | Death of John Milton | 1674 |
| 9. | Oliver Goldsmith | 1728 |
| 10. | Benvenuto Cellini | 1500 |
| 10. | Friedrich Schiller | 1759 |
| 13. | Robert Louis Stevenson | 1850 |
| 15. | Articles of Confederation Adopted | 1777 |
| 16. | Suez Canal Opened | 1869 |
| 18. | Robin Hood's Day. | |
| 18. | Death of Martin Luther | 1546 |
| 19. | Thorwaldsen | 1770 |
| 19. | Dedication of Cemetery at Gettysburg | 1863 |
| 24. | Grace Darling | 1815 |
| 25. | Battle of Chattanooga | 1863 |
| 27. | Fanny Kemble | 1809 |
| 29. | Louise M. Alcott | 1832 |
| 29. | Sir Philip Sidney | 1554 |
| 30. | Anton Rubinstein | 1830 |

*A PUBLICATION FOR TEACHERS AND PARENTS*

# The Elementary School Teacher and Course of Study

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**Edited by FRANCIS W. PARKER, Director of the School of Education ✿ ✿ ✿ ✿ ✿ University of Chicago**

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THE ELEMENTARY SCHOOL TEACHER AND COURSE OF STUDY is distinctively a new departure in periodical literature devoted to education. It is designed primarily as a text-book and guide of the students in the School of Education of the University of Chicago, but its larger purpose is to extend the benefits of this department of the University to teachers and others who wish to keep in touch with the new educational movement.

The first volume was published during the year ending June 30, 1901, by the Chicago Institute under the title, *The Course of Study*, and the journal will continue to appeal to teachers and parents, each number containing practical plans for teaching in every grade through the high and pedagogic schools.

The scope of the magazine is practically the scope of the School of Education. Each teacher prepares the work of his own department or grade, and presents, month by month, in a practical and usable form, an outline of the work being done under his direction, together with full book references, illustrations, and, in many cases, working drawings These outlines treat fully the work of all departments and all grades from the kindergarten through the fourth year of high school, together with the work of the pedagogic students. This treatment covers the whole range of educational subjects, including science, art, literature, language. mathematics, music, manual training, library work, and home economics, Essays and lengthy discussions are avoided, and the emphasis is laid upon the correlation and adaptation of subjects to the needs of the pupils.

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